

THE MILLING WORLD

AND

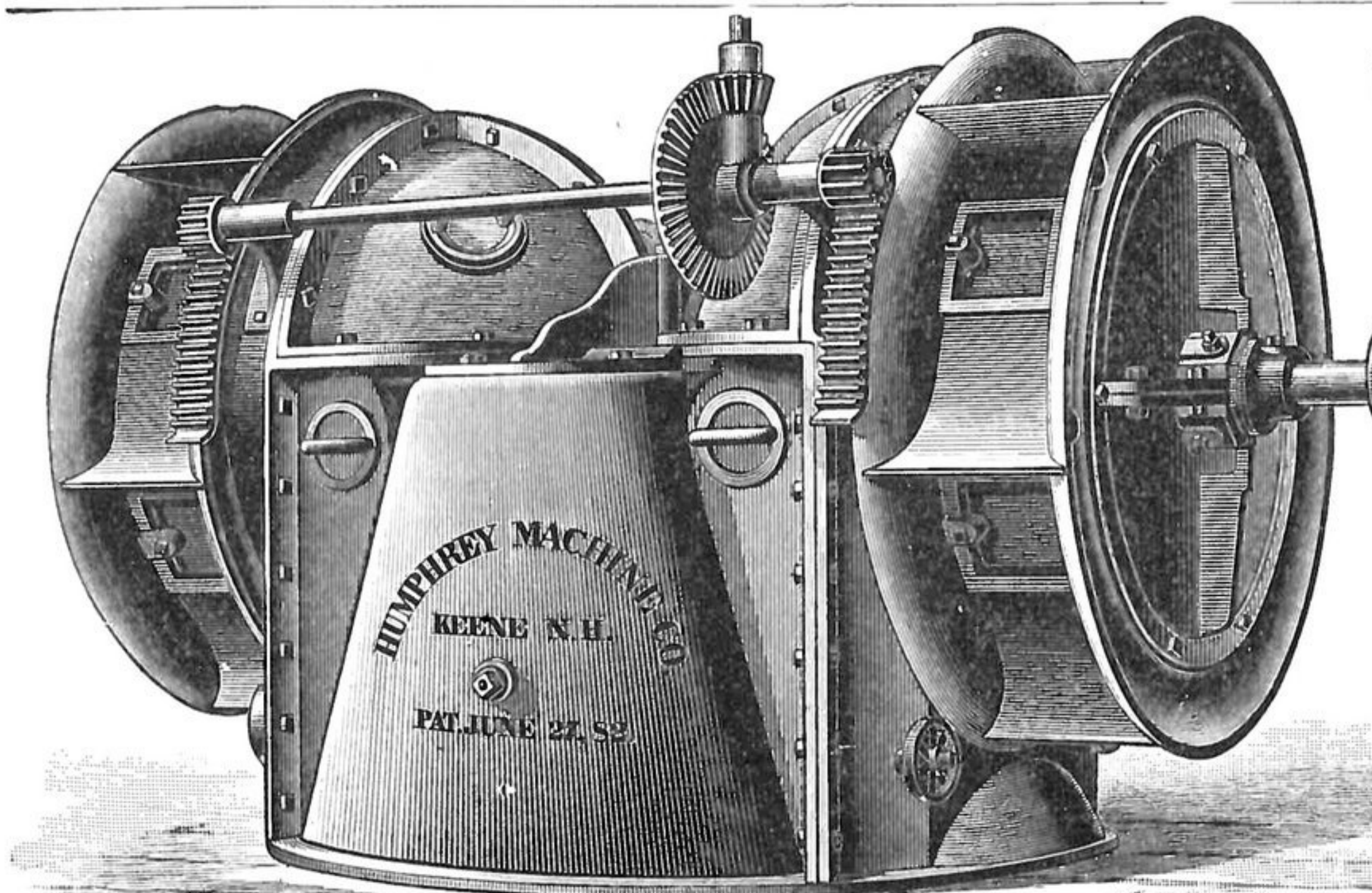
CHRONICLE OF THE GRAIN AND FLOUR TRADE

PUBLISHED EVERY MONDAY MORNING.

VOL. XXIII. No. 6.

BUFFALO, N. Y., OCTOBER 6, 1890

\$1.50 PER YEAR.

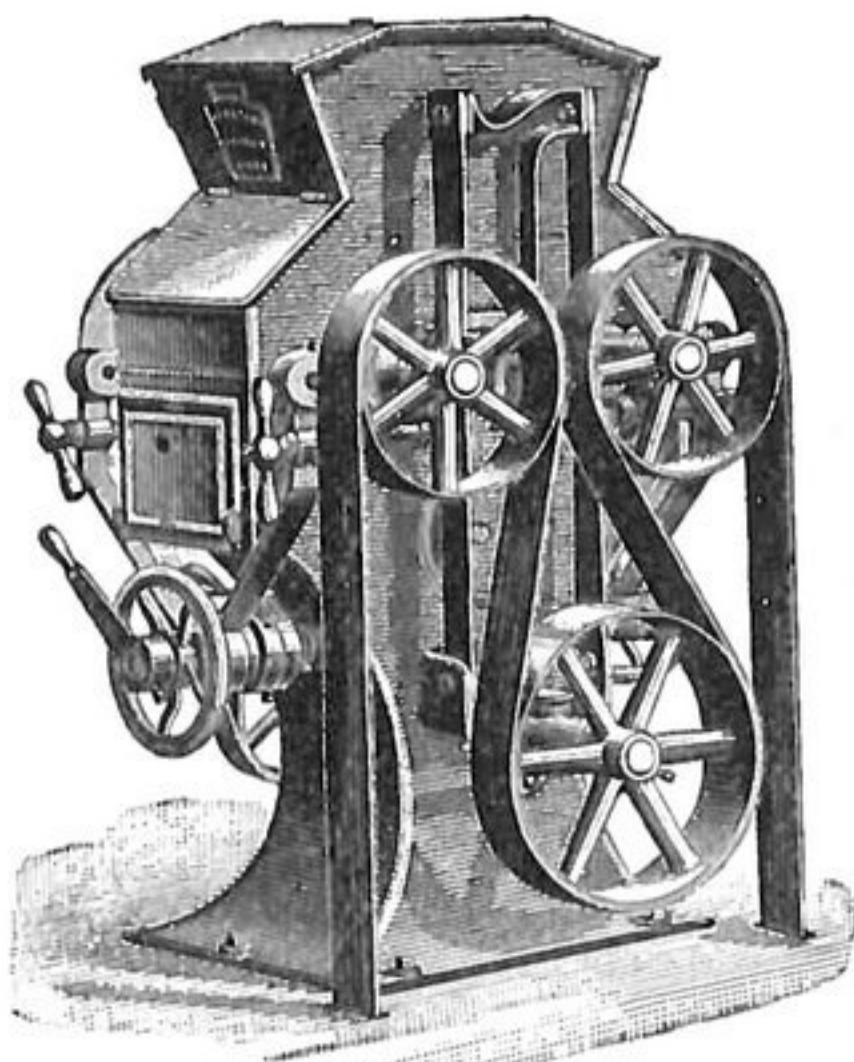


THE X-L-G-R ^{OR} IMPROVED CIRCUMSHOT Water Wheel

On Horizontal Shaft. Saves cost, annoyance and loss of power incident to use of gears. Affords more available power from water applied at full or part gate than any other. The cheapest, best and most desirable Water Wheel yet produced.

EFFICIENCY, ECONOMY and EXCELLENCE FULLY GUARANTEED.
Humphrey Machine Co

KEENE, - - N. H.



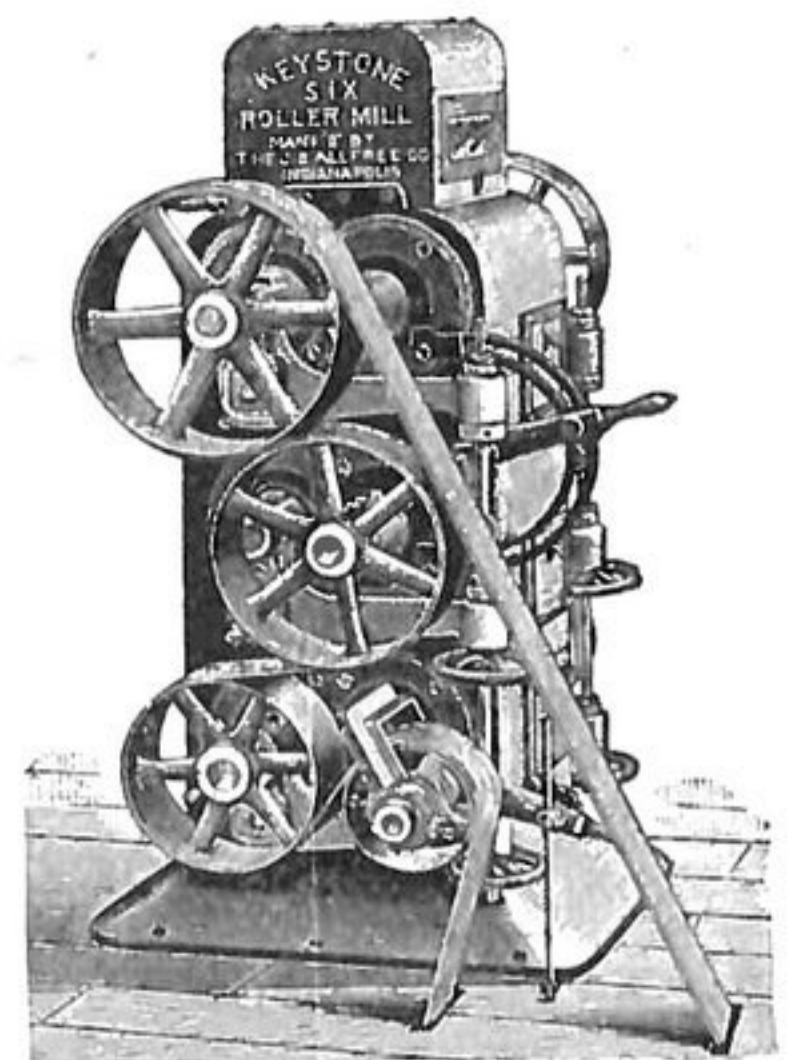
'Keystone' 4-Roller Wheat Mill.

Flour Mills. Corn Mills.

Send for Circular of our New 6-Roller Corn and Feed Mill.

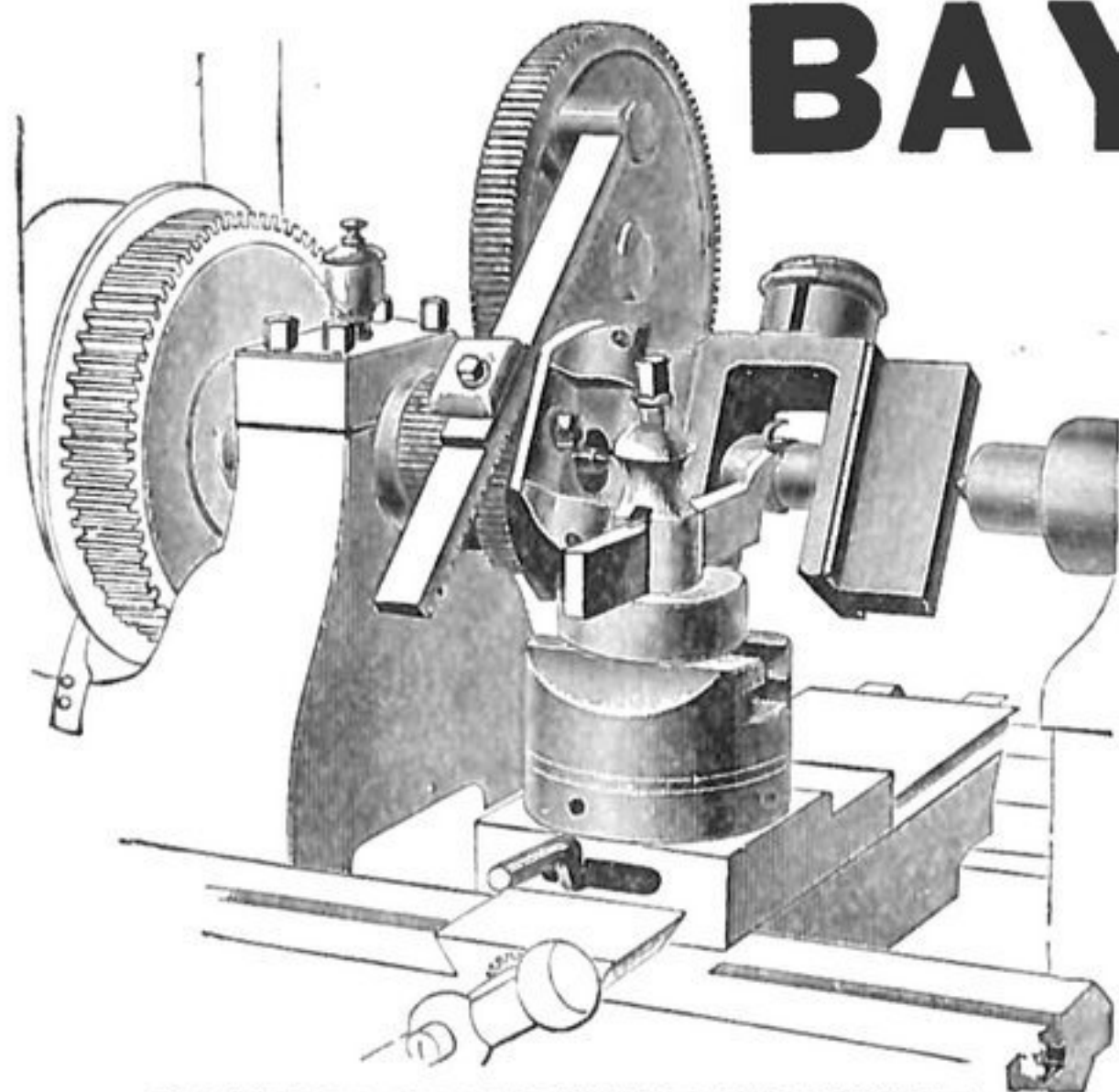
Entire Belt Drive.
Positive Differential.
Automatic Vibratory Feed.
Large Capacity.

Easily Operated.
Great Strength and Rigidity.
Simple Adjustments.
Perfect Construction.



'Keystone' 6-Roller Corn & Feed Mill.

ADDRESS THE J. B. ALLFREE CO., 76 to 86 Shelby Street, INDIANAPOLIS, IND.



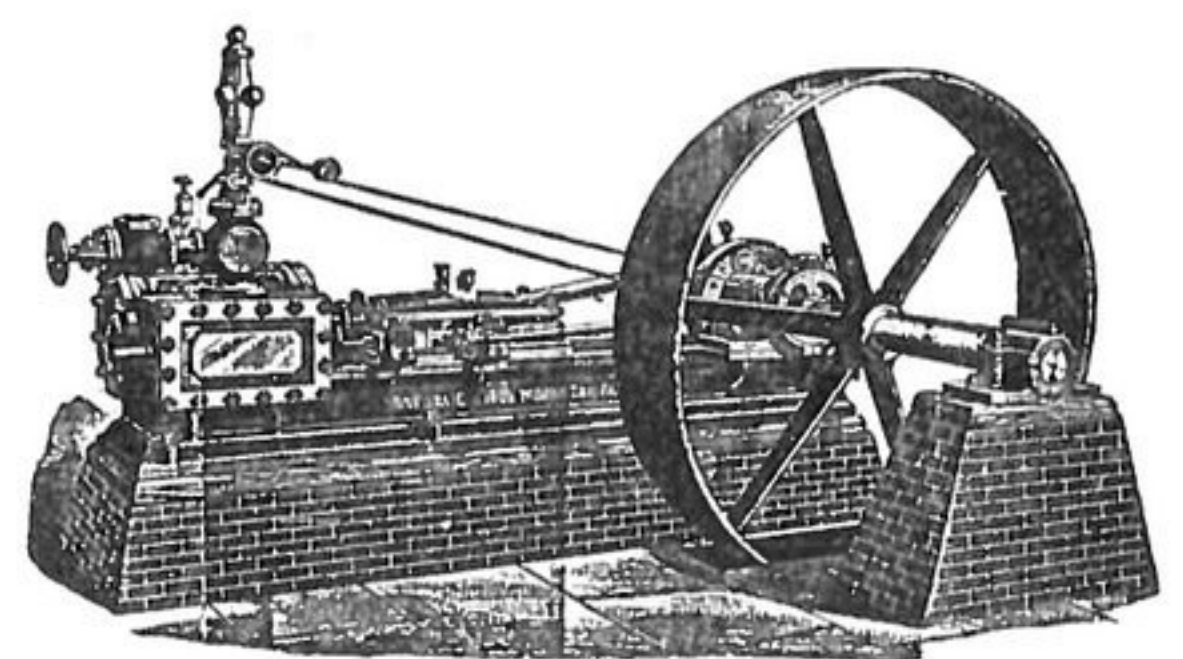
PATENT CROSS-HEAD MACHINE.

BAY STATE IRON WORKS

— MANUFACTURERS OF —

Engines, Boilers & Hoisting Machines

Also the Patent Cross-Head Machine and Acme Cube Pipe Tongs. We make either Center or Side Crank Engines, on same bed. Make engines from 5 to 250 Horse-Power. Have over 3,500 Engines and Boilers and over 1,000 Hoisting Machines in use, and all giving good satisfaction. Send for Catalogue and Prices.



HORIZONTAL ENGINE.

Noble & Hall, Box 462, Erie, Pa.

OFFICE OF CASE MANUFACTURING COMP'Y COLUMBUS, OHIO.

The Case Roller Mills. Over 14,000 Pairs in Use.

PLEASE READ OUR DESCRIPTION OF THEM, EVERY STATEMENT OF WHICH IS ABSOLUTELY TRUE.

PLEASE READ WHAT MILL OWNERS SAY ABOUT THEM.



The accompanying cut is a correct illustration of our latest improved Four Roller Mill. For fine work, great durability, simplicity, and general excellence, they stand "head and shoulders" above all others.

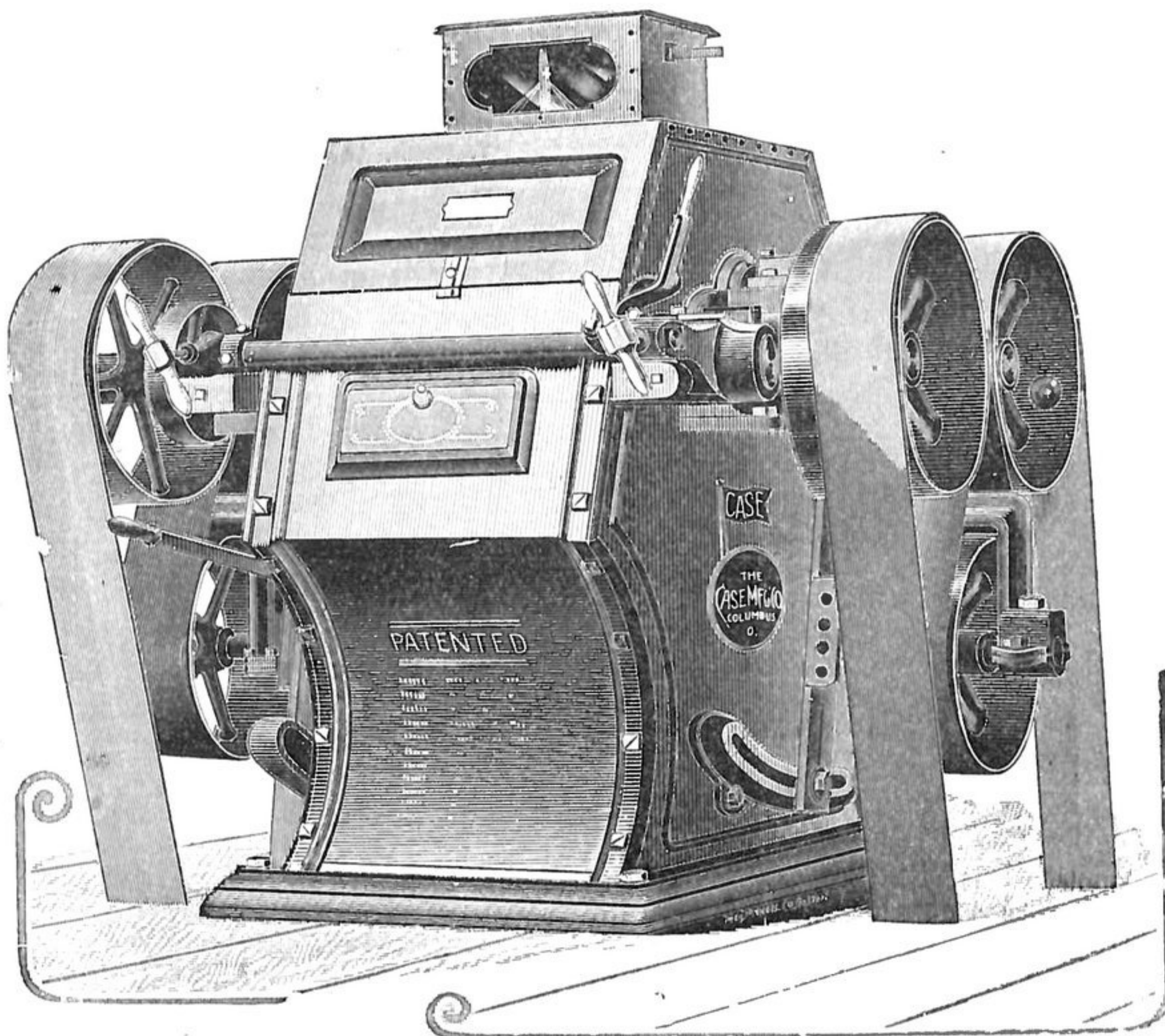
The frame is of iron with a heavy iron base.

The wood-work in top is of select cherry and black walnut, carefully shellacked and varnished.

The handles of adjusting screws and levers are finely nickel plated.

The joints are tight and dustless.

The adjustments easy, simple and perfect.



The roll bearings are wide and finely babbitted.

The belt drive is positive—no little short belts to slip.

The door for examining stock is a great convenience.

The arrangement for leveling rolls, simple and accurate.

The rolls can be thrown apart their entire length by one movement of the lever, and brought back again to original position, requiring no re-setting or expertizing.

Each machine is provided with our AUTOMATIC VIBRATING FEED, which requires no attention, and never fails to spread the feed the entire length of the rolls.



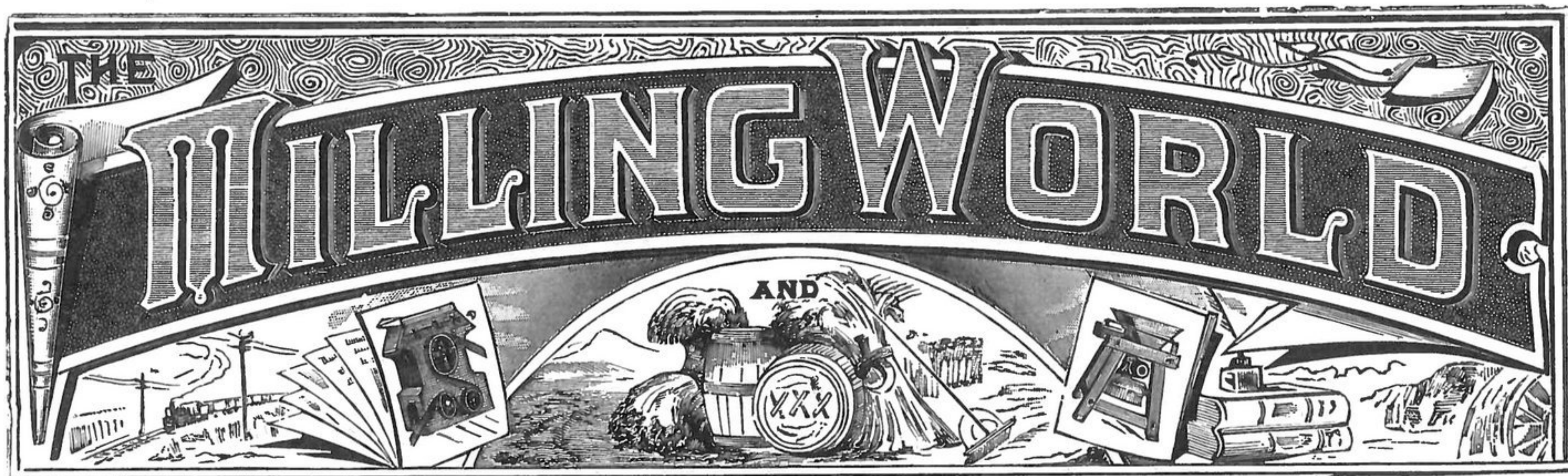
LISTEN! MICHIGAN MILLERS TALKING NOW.

CHARLOTTE, MICH., AUG. 5, 1890.

MESSRS. CASE MFG. CO., COLUMBUS, O.

Gentlemen: The mill is running fine. We are enjoying quite a fine litt'e trade. Already have put over twenty tons of flour on the market here since we started the 7th of July, and it is giving elegant satisfaction. Every one who has seen our outfit pronounces it A 1, and the Case Automatic Feed can't be beat. In fact the Rolls are models of perfection. We are making a close finish and placing our goods alongside of the long system mills, carrying off the cake. We are highly pleased with the millwright work, and find your Messrs. McKenie and Shough congenial gentlemen to do business with.

Very truly yours, PERKINS & MOON.



AND
CHRONICLE OF THE GRAIN AND FLOUR TRADE

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REPORTS from all quarters of the winter-wheat belt indicate a very largely increased acreage sown to winter wheat this fall. Generally the sowing has been accomplished under favorable conditions, and the plant is already in good shape for the winter. Evidently the western wheat-growers are not discouraged by the decidedly unfavorable summer just ended, and they are going to be ready for a "bumper crop" in 1891.

DURING the first eight months of this year the number of immigrants arriving in the United States was 335,921, against 300,563 in the corresponding months last year. Evidently things industrial, social and agricultural are not improving in Europe. At the rate of five bushels per head yearly, the newcomers during the first eight months of 1890 added to the wheat-consuming capacity of the United States by at least 1,679,605 bushels. At the same rate the total immigration for 1890 will reach 503,883, meaning an increase of 2,519,415 bushels in the yearly wheat-consumption of the country. Enough immigration is all right, but too much is all wrong, and the United States is certainly getting too much of an undesirable sort.

It is amusing to note the impudence of one or two journals, which never say a word to millers on milling subjects, and yet are silly enough to apply the term "alleged milling journals" to the five or six journals in the United States which are always talking milling to large numbers of actual millers. One speculators' journal and one wholly non-descript journal are special offenders in this line of silliness. Neither one of the two is milling flesh, speculating fish, or gambling fowl. Both are out of their depth. The millers have no use for them, and even the speculators, who take the daily papers, find the two very antique chestnut in flavor. Yet these two aimless, witless publications have the feeble fatuity to attempt to decry the journals that have kept in touch with the millers for years, and that propose to continue in the way, despite the silliness of the outsiders aforementioned.

RUSSIA is making giant efforts to develop and perpetuate an export trade in wheat grain. Several good crops in succession have aided the Russian enterprise very greatly, but Russia will never receive the full profit of a great wheat industry until she advances to the point of converting her fine wheat into flour for export. Her proposed great elevators on the American plan may help her grain trade somewhat, but not till they are supplemented by great flouring-mills will the wheat industry realize for Russia all that there is of profit in it. Last year's crop gave Russia nearly 100,000,000 bushels of wheat to export. It went to other countries and employed capital and labor there. It should have employed the capital and labor of Russia. In that way the slim margin of profit to the growers would have been supplemented by the profit of the miller and the handler, and Russia would have been richer by millions on the crop. To export 100,000,000 bushels of wheat grain is magnificent, but not profitable. To convert that amount of grain into 22,000,000 barrels of flour and export that would be both magnifi-

cent and profitable. Russia has yet many steps of great length to take to keep her in the fictitious rank given her by several successive large crops.

SOME very recent reports favor the belief that the spring wheat crop in the Northwest is larger, by a considerable amount, than published reports have made it. Letters from wheat-growers state that the published figures for some large portions of South Dakota and North Dakota are "far out of the way." For instance, 100 letters from points reported on show a yield from 20 to 65 per cent. larger than the published estimates for those points. In only 5 or 10 cases out of several hundreds do the acknowledged threshing returns fall to, or below, the published figures. One county in North Dakota is set down at 9 bushels to the acre, and one correspondent in that county writes that, out of 63 growers whom he has interviewed, only one reported a yield so low as that. The others reported from 13 to 21 bushels to the acre. Taking it for granted that the sections reporting an average, or more, are reporting correctly, it seems safe to assert that the totals for North Dakota and South Dakota will be considerably above those now generally accepted, and doubtless special investigation in Minnesota would result in the same way. It is plain that men in the trade are "banking on" larger supplies than have been estimated in the Northwest. If they believed the published figures, they would be taking a course very different from their present one.

WHEAT CROP estimates are settling down to a business basis. The latest indications call for a crop of 405,000,000 to 410,000,000 bushels in the United States. The winter wheat is generally good, plump and easily milled. The spring grain is not so good on the average. The yield in North Dakota, South Dakota and Minnesota is about 100,000,000 bushels, but a considerable percentage is somewhat shrunken or wrinkled, which will make it harder to mill. The gluten is all right, and the flour from the spring grain will be of a high quality generally. American millers will have plenty of wheat to grind, and there is no reason why the flour exports for the crop year should fall below those of the past crop year. Late reports indicate only an average crop at best in Russia, notwithstanding the persistent boom reports sent out by certain interested dealers in Europe, and the quality of the Russian wheat is by no means as high as early reports indicated. The only exporting country in Europe that has an unusually large and fine surplus is Austria-Hungary, in which country the disasters of 1888 and 1889 are partially retrieved in a good crop in 1890. Lately there has been an attempt made to swell the figures of the French crop, but it is not easy to swell a crop after it is harvested. Everything in the situation appears to point to a call for all the surplus of the United States during the coming winter. American millers will probably convert about 375,000,000 bushels of wheat into 75,000,000 barrels of flour, and about 12,000,000 barrels will be exported, besides a fair quantity of grain. With the situation altered in India and Russia by the rise in silver, it seems safe to predict that those countries will do far less, proportionately, than they did last year.

The DAWSON ROLL WORKS CO.

FOUNDERS & MACHINISTS,

—MANUFACTURERS OF THE—

Dawson Roller Mills

—AND FURNISHERS OF—

CHILLED IRON ROLLS

WITH DAWSON PATENT CORRUGATION.

ALL STYLES OF FLOUR MILL ROLLS RE-GROUND AND
RE-CORRUGATED WITH ANY FORM OF CORRUGATION.

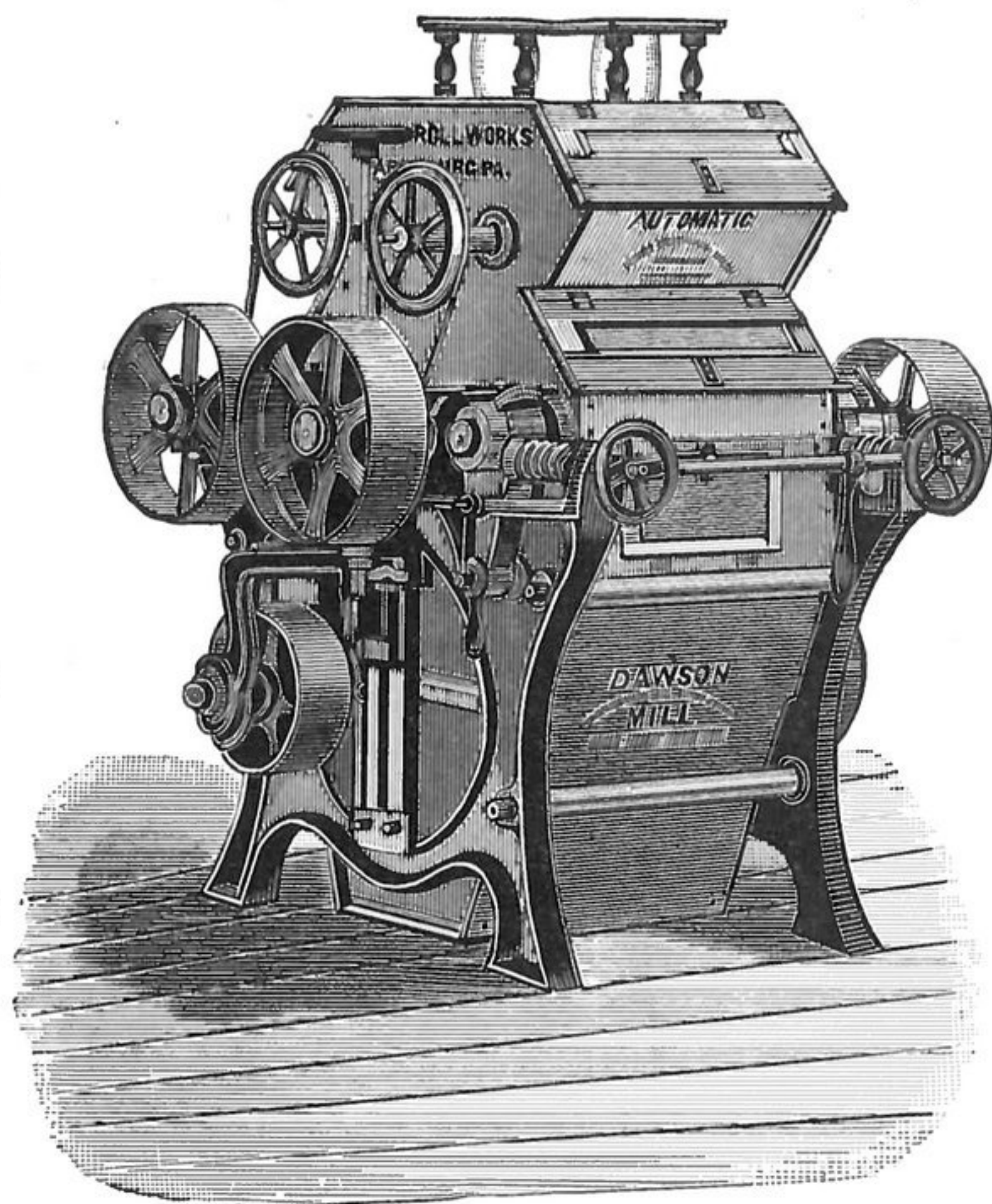
We have had large and extended experience in grinding and corrugating chilled rolls for milling, and have one of the largest and most improved plants in the country for this work, which enables us to meet the most exacting requirements of the trade promptly.

ORDERS AND CORRESPONDENCE SOLICITED.

DAWSON ROLL WORKS CO.

South and Short Streets,

HARRISBURG, PA.



BEST STEEL SAFETY MADE FOR
\$35

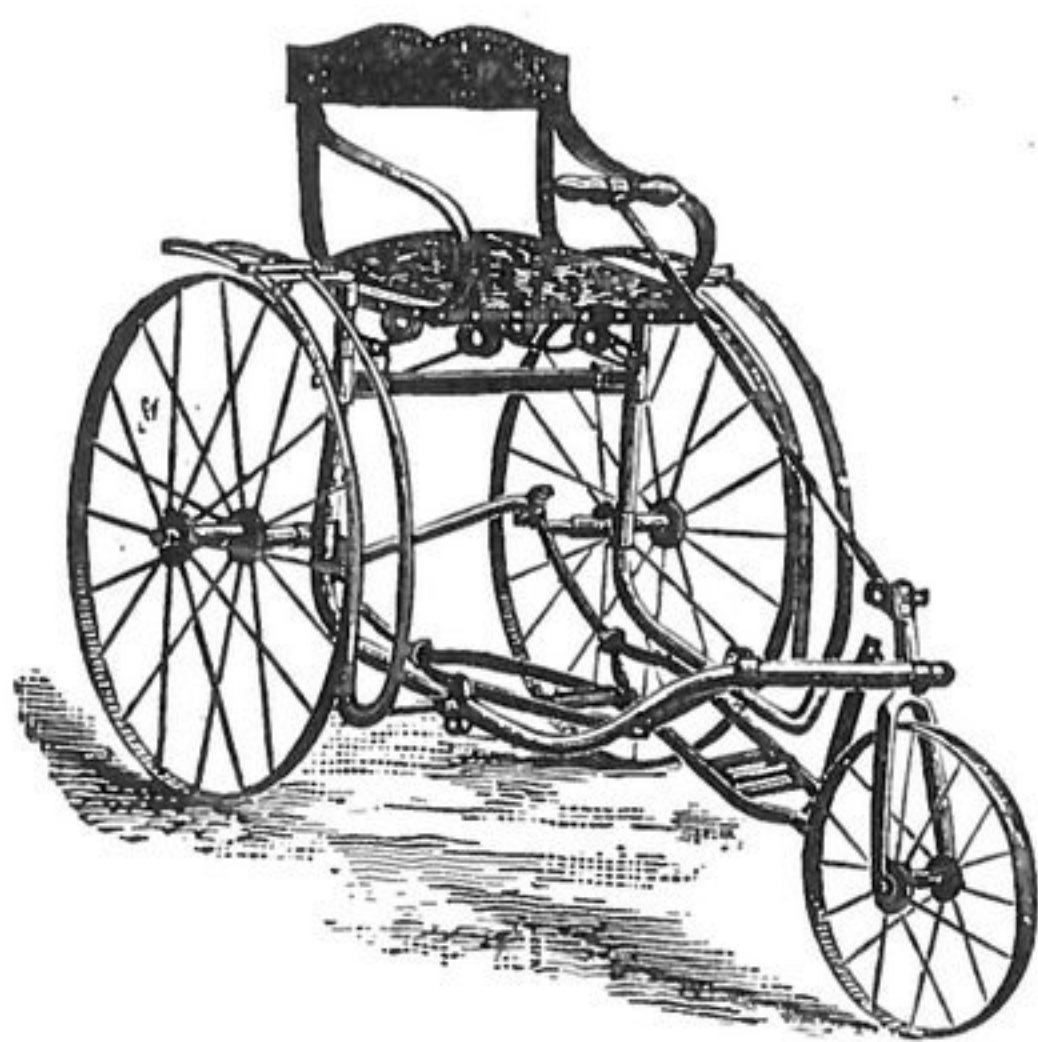
Easiest LADIES' Tricycle Known

Our Tricycles the Only Machine ever Recommended by Physicians for Ladies and Girls of a Delicate Constitution.

THE BUFFALO TRICYCLE CO.

Manufacturers of Ladies' and Girls' Tricycles, Ladies' and Boys' Safety Bicycles, Etc., Etc.

640 Linwood Ave., **BUFFALO, N. Y.**
SEND FOR CATALOGUE AND PRICES.



L. L. WHITLOCK,
Advertising Agent

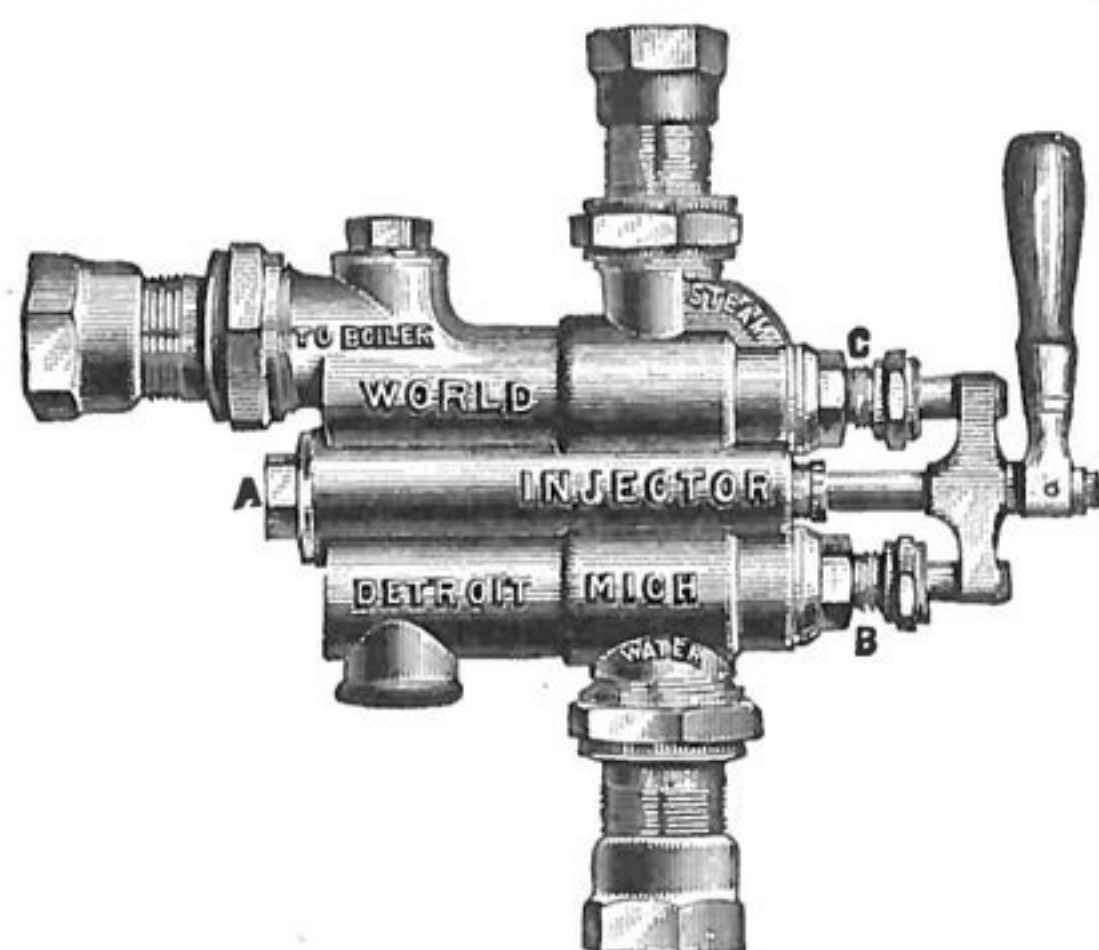
FOR MANUFACTURERS.

TRADE JOURNALS A SPECIALTY.

P. O. DRAWER 5323. *Boston, Mass.*

As Agent for Advertisers instead of Papers, I obtain the Best Rates Possible for my Customers.

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WITH WHICH THIS PAPER IS PRINTED
IS MADE BY THE
QUEEN CITY PRINTING INK CO.
CINCINNATI, O.



THE Best is the Cheapest. Whenever you want a Boiler Feeder that will prove reliable under all circumstances, buy the **WORLD** Injector. It is absolutely the simplest and safest to operate and handle of any injector now on the market, **FOR** it is operated by a single lever only. In whatever territory you find these reliable World Injectors on **SALE** they are always guaranteed by the seller.

GOLD is good in whatever part of the world you may travel, and the "**WORLD**" Injector is worth every **DOLLAR** it will cost you. Catalogue containing Price List, valuable tables, and useful facts, figures and information **SENT** to engineers, machinists, and all interested in a perfect working injector, post-paid, upon application, **FREE**

AMERICAN INJECTOR COMPANY,

175 Larned Street West, **DETROIT, MICH.**



PUBLISHED EVERY MONDAY. OFFICES: { Corner Pearl and Seneca Streets,
Buffalo, N. Y.
McFAUL & NOLAN, - - - PROPRIETORS.
THOMAS MC FAUL. JAMES NOLAN.

SUBSCRIPTION.

In the United States and Canada, postage prepaid, \$1.50 Per Year, in advance; remit by Postal Order, Registered Letter, or New York Exchange. Currency in un-registered letter at sender's risk.

To all Foreign Countries embraced in the General Postal Union, \$2.25 Per Year, in advance.

Subscribers can have the mailing address of their paper changed as often as they desire. Send both old and new addresses. Those who fail to receive their papers promptly will please notify at once.

ADVERTISING.

Rates for ordinary advertising made known on application.

Advertisements of Mills for Sale or to Rent; Partners, Help or Situation Wanted, or of a similar character One cent per word each insertion, or where four consecutive insertions are ordered at once, the charge will be Three cents per word. No advertisement taken for less than 25 cents. Cash must accompany all orders for advertisements of this class.

Orders for new advertisements should reach this office on Friday morning to insure immediate insertion. Changes for current advertisements should be sent so as to reach this office on Saturday morning.

EDITOR'S ANNOUNCEMENTS.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

Correspondents must give their full name and address, not necessarily for publication, but as a guarantee of good faith.

This paper has no connection with a millfurnishing house and aims to represent the trade without prejudice, fear or favor.

Address all communications

THE MILLING WORLD,
BUFFALO, N. Y.

Entered at the Post Office, at Buffalo, N. Y., as mail matter of second-class.

SITUATIONS WANTED.

Advertisements under this head, 25 cents each insertion for 25 words, and 1 cent for each additional word. Cash with order. Four consecutive insertions will be given for the price of three.

SITUATION WANTED.

Head miller with over 20 years experience want to make a change this spring. Address, A. MILLER, 67 Weaver Alley Buffalo, N. Y. 4t

SPECIAL ADVERTISEMENTS.

Advertisements of Mills for Sale or Rent, Partners Wanted, Machines for Sale or Exchange, etc., etc., cost 1 cent per word, for one insertion, or 3 cents per word for four insertions. No order taken for less than 25 cents for one insertion, or 50 cents for four insertions. Cash must accompany the order. When replies are ordered sent care of this office 10 cents must be added to pay postage.

WANTED, TO RENT.

A good Custom Mill, in a good grain section. Steam or water power. Address, MILLER, P. O. Box 170, Pocomoke City, Worcester County, Md. 252

FOR RENT.

Clinton Mills, at B'ack Rock, Buffa'o, for rent on reasonable terms, recently repaired and put in good order. Apply to CHAS. DANIELS, over 811 Main Street, Buffalo, N. Y. 6tf

FOR SALE.

Rare chance, Grist, Saw, Planing Mill, Lumber and Coal Yard, doing good business. Growing village; 15 miles from Washington. Owner wishes to retire. Small capital needed. Terms easy. A. FREEMAN, Vienna, Va. 37

FLOUR MILL WANTED

Flouring-mill wanted at Evart, Osceola Co., Mich. Good wheat region, large territory. Correspondence solicited. GEO. W. MINCHIN, Evart, Osceola Co., Mich. 69

FOR SALE.

A cheap and desirable mill property, consisting of a Grist Mill, Saw Mill, two dwelling houses and all other necessary buildings. The mill has a good custom trade, nicely situated in the borough of New Buffalo, Perry County, Pa. For full particulars call on or address JEFFERSON WADE, New Buffalo, Pa. 232

FOR SALE.

Flour and saw-mill with or without farm of 38 acres. Four buhr mill, with machinery and building in most excellent condition. Buildings on farm good. Good run of custom. Can run by water 9 months, also have steam power. Terms easy. On Big Indian Creek, 1/4-mile from Crandall, on Air Line. Mrs. C. KRACKMAN, Crandall, Ind. 36

MILL MACHINERY FOR SALE.

One No. 0 Standard Combined Separator, Smutter and Brush Machine; new, best make.
One 20-Inch Under-Runner Portable Mill, French Buhr Stone, capacity 10 to 12 bushels per hour; new, best make.
One 14-Inch Vertical Feed Mill; best make, new, a bargain.
One No. 6 Dustless Separator; new, a bargain.
One No. 1 Full Rigged Combined Dustless Separator; new, a bargain.
Four Corn Cob Crushers, right or left hand, driven from above or below, best make; capacity 40 to 60 bushels per hour.
Three No. 1 Corn Shellers, capacity 200 to 300 bushels per hour; new.
One No. 2 Purifier. New. Best make. A bargain.
One 20-Inch Portable Mill.
One 18-Inch Double Gear Portable Mill.
For particulars address, FRANK SMITH, care of THE MILLING WORLD, Buffalo, N. Y. 5tf

FOR SALE AT A BARGAIN.

I have a half interest in a Short System Roller Mill which I will sell at a bargain. Don't write unless you mean business. Address, GEO. FOSTER, Wakeman, O. 47

FOR SALE.

One No. 1 Howes, Babcock & Co., Silver Creek, N. Y., Lengthened Scourer and Smutter, nearly new. Address, CHAS. SCHOEPLIN & BRO., Gardenville, N. Y. 46

FOR SALE

Whole or part of a 125-barrel Flouring Mill, built entirely new from ground up. Equipped with latest machinery. Side track at mill door. Located in South Michigan. Big local and exchange trade. For further particulars address B. B., care of THE MILLING WORLD. 37

READ carefully the new advertisement of Messrs. W. H. Morehouse and Company, of Toledo, Ohio, which appears in this number of THE MILLING WORLD. Correspondence with them will be profitable. Their line of seeds and grain is full, and they solicit correspondence for terms and prices.

EVIDENTLY the situation in Manitoba is as bad as even the worst reports have made it. On September 27th Chicago dealers received the following dispatch: "Winnipeg advises this morning are more than gloomy. They say that Manitoba has not 10,000 bushels of No. 1 wheat, and that the bulk of the crop is only fit for pig feed."

FLOUR-MAKERS are interested in the statement that a very large percentage of the spring wheat of this crop is grading No. 1 and No. 2 Northern, where No. 1 Hard would be the normal and desirable grade. The smaller proportion of No. 1 Hard means an important difference in flour values, and it means a good deal for the export trade, both in grain and in flour.

EUROPEAN economic writers are generally very amusing when they treat American subjects. An illustration of their unconscious humor is given in the statement now going the rounds in Europe that "the United States has a famine crop of wheat, maize, potatoes and other staple foods." We opine that, if our 410,000,000-bushel wheat crop and 1,500,000,000-bushel maize crop are "famine crops," the effects of the "famine" will be felt principally in those European countries that have been using a large proportion of our yearly surpluses of cereals. The European idea of United States luxuriance seems to be that a wheat crop that leaves only 70,000,000 bushels for exportation is a "famine" crop.

THE Milwaukee "Name" ridicules our Buffalo cotemporary for selling itself, our Chicago cotemporary and a steel flour-trier for \$1.50, and in the same column the "Name" innocently announces that it will sell itself and the Minneapolis "Yahoo" for \$3.25 a year, or itself and any monthly milling journal for \$1.50. Not even giving itself away will get the "Name" into circulation, and the offer by our Buffalo neighbor is far more valuable than that of the "Name." It should be noted that the "Name" has actually found something in its British cotemporaries "worth printing on this side," and it is now reprinting articles several months old that have been before the millers of the United States for weeks. Wake up, Mr. "Name"!

A DISPATCH from Tacoma, Wash., dated September 30th, says: Harvest is ended in eastern Washington. The yield is above the average. Prices are satisfactory. The general average of all kinds of grain is the best this season ever seen. Although 30 bushels per acre of wheat is considered a general yield year after year, the average of the present year will not fall under 40 bushels, barley 80 and flax 14, and the average yield of oats is 60 bushels per acre. Some enormous yields are reported, and the list is headed with one acre belonging to E. J. Northcutt, of Pullman, who harvested 101 bushels from a single acre. There is a movement on foot among farmers to make experimental shipments to Chicago by way of Duluth. They believe that this would save them profit and the margin of the local buyer. If the move proves successful, large quantities of wheat will hereafter be shipped direct by the grower to Duluth from Tacoma and other points to which shipments are made.

POINTS IN MILLING.

AUTOMATIC sprinklers are a great institution. Within a short time I visited a mill that had been "saved by an automatic sprinkler." I will not locate it, but I am free to say that if that plant was a specimen of the average "saved" plant, I would prefer to have the flames wipe out the concern. In this case the fire started, as it usually does, in a "mysterious" way, on the first floor, and the flames managed to get to the second floor before the automatic sprinklers began to sprinkle. When the sprinkler got in its work, it did so thoroughly. The two floors contained most of the valuable machines in the mill, and, though the machines were not burned, nor any of them even seriously damaged by fire, yet they were "out of the field" quite as thoroughly as though they had been reduced to ashes and scraps.

THE "saved" mill and its contents offered a suggestive sight. The "saved" machines were forlorn looking things, and I could not help wondering what use they would be put to by the insurance companies, in case they took them off the owner's hands, or what the owner would do with them in case he accepted a money settlement with the companies. They were rather valuable for kindling-wood, but entirely useless for milling purposes. The wooden parts had been soaked thoroughly by the remorseless sprinklers, and they were swollen, bulged, distorted and cracking apart as they dried out. They were evidently "saved," and quite as evidently they were destroyed, and it is an interesting question whether a complete wiping out by fire would not have been preferable.

I DON'T believe that there is any contrivance possible that will ever take the place of incessant watchfulness in preventing fires in mills. The fires that come from sudden flaming-out of dust are hard to handle, but every miller knows every spot in his mill where fires of that class are likely to occur, and he knows those are the spots where watchfulness should be constant, and where suitable means of extinction should be placed. Certain other spots conceal lesser dangers, and provision should be made for them. The insurance men who depend upon sprinklers will not be encouraged by the result. Flour-mills are doubtless very dangerous risks, but what is really gained by substituting water damage or ruin for fire damage or ruin? Shifting the style of destruction will leave the loss in dollars and cents exactly the same.

A CORRESPONDENT writes to THE MILLING WORLD: "When you can produce potatoes without eyes and apples without stems, you may be able to produce wheat without a stem." Now, Mr. Editor, I don't know what your correspondent means by sending you such a statement, or what you mean by forwarding it to me without comment. It is possible that he may refer to one of my questions concerning wheat berries without the usual crease. If he does, I would like to have him, or her, recall what has been done with potatoes, tomatoes, strawberries, and about every other fruit and vegetable, in the past thirty years, in the way of developing, improving, enlarging, dropping objectionable and adopting desirable features. The tomato used to be all cavity; it is now solid. The strawberry used to be a mere coat of seeds about a small core of pulp; it is now three to five times as large with the same number of seeds. Can your correspondent, Mr., Miss, or Mrs., "G. W.," say authoritatively that the attempt to eliminate or to minimize the crease in the wheat berry is a hopeless thing from the start? Maize, or corn, has been developed from a cluster, in which each grain had a separate coat, or husk, to the ear with only one outside coat. Each grain sits in the remnant of its original separate husk, which has been shortened by scientific culture to a mere rudiment. Wheat-growers have "improved" the awn off wheat already, and it would be a bold individual, or a very ignorant one, who would say that it is impossible to make an impression on the crease by scientific experimenting. Every cereal now grown generally is very different from what it was 100 years, or even 50 years, ago. Permit

me to ask your correspondent, "G. W.," just what he knows about the possibility or the impossibility of eliminating or reducing the crease in the wheat berry. Let him stick to the "crease," not the "stem." No one objects to the stem, as the miller does not have to grind that.

THE WAGES OF FLOUR-MAKERS.

Following are several communications published by the London "Miller," showing the wages paid to millers in various countries. The New South Wales correspondent writes: "From the secretary of the Trade Hall I learn 8 hours to be a day's work; 48 a week's; the shifts adjustable to meet conveniences for overlapping, etc.; for instance, a man might work 10 hours a day one week and 6 hours the next. Wages—General hands \$10.69; millers \$14.58; foremen \$21.87. 'Millers' means 'roller men.' Stonemen probably \$12.15 per week; but 50 roller men would get employment to one stoneman. The bulk of the flour is made in roller mills. I can not say positively that the arrangement of time (10 hours one week and 6 hours per day the next, averaging 8 hours a day) will be agreed to by the unionists; they had not settled that point, but are willing to adjust the shifts to meet the requirements of the trade, and the secretary thought there would be no objection to arrange the hours as I suggested, 10 hours one week and 6 the next; 48 hours a week's work. Fewer men are required in roller mills than in stone, thus there are many operative millers out of work. A full demand for men the first six months of the season, very slack work the last six months of the season, is the rule."

The correspondent in Victoria writes: "Hours—Owing to the successful crusade made by the Millers' Union of Melbourne, the day's work of eight hours is now recognized and adopted throughout Victoria. Sunday work is not performed in any of the flour-mills in this colony, so far as my knowledge goes. The Melbourne mills are the only ones which work throughout the year. The country ones are mostly very small affairs, generally two or three pairs of stones or their equivalent, if on the roller system, and, being dependent on the local supply of wheat, are worked for periods of from 3 to 9 months in the year. Generally, in the country, the proprietor himself works in the mill. The largest mills pay their foremen from \$19.44 to \$29.16 per week, stonemen would get about \$12.15, and packers, oilers, etc., about \$9.72 per week. In the country mills the miller, where one is employed, gets \$12.15 to \$14.58 per week, other men \$8.50 to \$9.72; but, of course, the employment is very precarious, and it must not be forgotten (by married men especially), that house rent, fuel, clothing and all imported articles, owing to the extravagant protective duties, are very much dearer than at home. If a miller can obtain constant employment here, he can do better than at home, but constant work is just what is most difficult to get, and it is a question whether, in the long run, he would not be more in pocket with constant work at lower wages in the old country, than higher wages and work for a few months in the year in Victoria. As an instance of the absurd system of protection rampant here, I may mention that the duty payable on mill machinery, such as roller-mills, which could never be profitably produced locally, amounts in the aggregate to about 38 per cent. There are now some 20 or 30 well-equipped roller mills in various districts, but the appliances and style of many of the small country mills are barbarous and would make an English miller or millwright's hair stand on end."

The Chicago correspondent says of wages in the United States: "This is a pretty large country, and usages and wages vary widely. Some States, for instance, have laws prohibiting Sunday labor, while others have none. As a rule Sunday work is not followed in mills, though there are mills that never stop, except for repairs, while they have orders ahead. The mills at Minneapolis shut down in deference to the request of the pastors of that city. As to hours, 12 is the usual shift. As to wages, Chicago is perhaps a fair average. Roustabouts get \$9 per week; purifiermen from \$12 to \$15 per week; roller men from \$15 to \$20 per week. Head millers receive anything from \$50 per month up to

salaries that rival those of governors of States. The head miller is not an operative, and his salary is purely a matter of private contract, depending on his ability and his employer's appreciation of it. In the country, especially in the States, a house is sometimes furnished the miller."

The correspondent in the Argentine Republic writes: "In Argentina flour-mills as a rule work only in the week. The working shift is from 12 till 12. The following are the wages paid: Head miller \$77.76 to \$145.80 per month; stone dresser \$38.88 to \$58.32 per month; rollermen \$38.88 to \$58.32 per month; spare men get \$1 per day."

Our French cotemporary, "La Meunerie Francaise," sketches the milling situation in France as follows: "The length of an operative's daily work is 12 hours. The work is done by means of gangs which relieve one another, that is to say, with two shifts; this is because nearly all our mills run without stopping by day or night. The day men get to work at 5 or 6 in the morning, and finish at 6 or 7 in the evening, according to the time of year; the night men work through the remaining hours. The rest in the day is about 2 hours in 2 or 3 stops. Moreover, it is well to note that the work of a mill, and especially of a modern mill, consists essentially in watching and cleaning; it does not, therefore, require the same concentration of mind that must be given by a workman employed in bridging or tunneling. Thus the daily rests which have been mentioned really mean a complete cessation from work. In many mills Sunday is a day of complete rest; in others the men only get one such day in the fortnight, the shifts taking it in turn to clean the machinery. The operatives earn 60 cents to \$1.40 per day. Work is paid for monthly; the operatives for the most part are lodged and boarded in the mill. Overtime may be said not to exist in flour-mills, on account of the work being divided into day and night shifts. Wages are paid monthly, but between pay-days the operative can get something on account if he asks for it. Slack seasons can only be the result of a short water supply or of floods, or again of repairs to the shafting, but they do not lead to the discharge of the staff of the mill, for whom other work can be found; they can, for instance, be employed in such repairs. Flour-mills give work to very few foreigners; such cases are quite exceptional. The few foreign workmen who have been able to get work in French mills have done so on account of the new plant; they are treated just like the French operatives. The lot of operatives in flour-mills is not such as in any way to call for legislation respecting their hours of labor. Milling is an industry which can only be carried on in complete freedom of factory legislation. The division of work in flour-mills into day and night shifts is essentially in the interests of the public; if the hours in an operative miller's daily work were shortened, it would be absolutely necessary, instead of dividing the day into two shifts, to have three shifts and to work with three sets of men, because to interrupt the work of the mill would be to diminish its outturn. From what has already been said, it follows that the cost of a third shift could only be met by calling for a sacrifice from the staff of the two other shifts; but if wages were maintained at the same level, the result would be an increase in the general expenses, and the burden of this increase could only be disposed of by adding it to the price of bread. Again, the staff of the third shift would have to be called into existence."

WHAT IRRIGATION WILL DO.

Hitchcock, in South Dakota, has been the scene of an experiment that will interest all millers and farmers. It is settled that nearly all of South Dakota is underlaid by an artesian basin, and the experiment of using artesian wells to irrigate wheat and other crop lands has been successfully made. The experiments were inaugurated and managed by the Hon. L. H. Hale, of Huron, and C. E. Bostwick, of Hitchcock. A quarter section of foul land was secured, which had been cultivated to wheat for eight years in succession without the use of any fertilizer whatever, and still further impoverished by the wasteful burning off of the stubble each fall. The ground was hastily plowed and harrowed on May 20th, and on May 25th one bushel per acre of Scotch Fife

wheat, not selected, but just as it came from the elevator, was sown broadcast over 50 acres. Twenty-five acres were irrigated from June 2d until matured, the remainder being left to the tender mercies of a Dakota summer. At harvest time three distinct tests were made of each piece, one measured acre being selected, stacked and threshed separately, with results checking within less than half a bushel. The irrigated land cost \$7.40 per acre and yielded 23 bushels, worth 85 cents per bushel, or \$19.56 per acre. The non-irrigated cost \$6.25 per acre, and yielded 4 bushels, worth possibly \$2, or 50 cents per bushel. Wheat from the tests were examined by Minneapolis experts, the irrigated grading "No. 1 Northern hard," the non-irrigated grading "rejected." The water used came from the Hitchcock artesian well, which is 900 feet deep, the water boiling out of a 4½-inch pipe with a total pressure of 165 pounds per inch. The water is clear, with a slightly brackish taste, and smells strongly of sulphur. An analysis shows the presence of sulphur, iron, lime and epsom-salts. The water was conveyed to the land by rude ditches hastily plowed out. The irrigated wheat stalks measured over 4 feet in height, with plump, heavy heads and firm, bright stalks; the "natural climate" wheat was 2 feet high, with thin, shrunk heads, and weak, dull stems. This experiment proves that wheat can be raised by irrigation at a cost of 32 cents per bushel, and worth 85, or a profit of 53 cents per bushel; while adjoining non-irrigated wheat costs \$1.56 per bushel, and is worth only 50 cents, a loss of over \$1 per bushel for producing a poor quality of chicken-feed. It proves that the artesian well water, although containing considerable mineral matter, will not injure but feed the small grains. The remainder of the quarter section was tested with oats, millet and corn.

EVIDENCE AGAINST BRAN FOOD.

Science and experiment do not offer the bran-crank much support for their fad. Dr. Max Rubner, at the Physiological Institute in Munich recently made an examination determining the value of bran as an article of food. In former investigations, made in the laboratory of Professor Voit, on the value of different kinds of bread, it was found that the bread made from the finest white flour was most completely digested. The ordinary brown bread was found to be of less value, and the so-called "pumpernickel," made from coarse bran, was the poorest. The daily quantity of dry substance was 25 grams for the white flour, 44 grams for the ordinary flour and 82 grams for bran. In the case of the brown bread the acid reaction was the probable cause of the large loss of nourishing material. The coarse particles of the bran, by irritating the membrane of the intestines, gave rise to a further loss in the latter case. Notwithstanding these results, the addition of bran to the flour used in bread-making was recommended by many on account of the nitrogenous substances and salts which the bran contains, but it was not determined whether these constituents were really assimilated in the system or whether the bran did not, perhaps, even carry off some of the other nourishing matter.

In England there is a new agitation in favor of bran-bread. A society has been formed there, at the head of which are all possible sorts of dukes and duchesses, lords and ladies, who advise the addition of bran, claiming that the bran-bread has a greater nourishing value. It is clear that this very important question can only be solved by direct experiments on men. Dr. Rubner determined the amount of material assimilated for three varieties of flour: 1. A fine quality. 2. Medium. 3. Flour made from whole grain with the bran. The dough was prepared with pressed yeast. In the excreta the following amounts of unused material were found, expressed in percentages of the quantity eaten:

	Variety of Flour		
	No. 1	No. 2	No. 3
Dry substances.....	4.0	6.7	12.3
Nitrogen.....	20.1	24.6	30.5
Carbohydrates.....	1.1	2.6	7.4

The quantity of dry excreta was therefore considerably larger in the case of the bran-bread, and it contained much more of the carbohydrates. It could be shown that the

excess of excreta in the latter case consisted essentially of the indigestible hulls of the grain, and that the bran had absorbed a portion of nitrogenous constituents and carbohydrates.

ENGLISH DEFINITIONS OF STOCK.

Writing in the London "Miller," a milling engineer defines several milling products as follows: Low-grade flour consists generally of the bran-flour and the flour from the last reduction, and, in the event of an offal divider being employed, the head-sheet of this machine is frequently also spouted and mixed with the low-grade flour. Bran-flour is obtained in various ways. If a bran-duster is used in the ordinary way, the bran is simply brushed and passes through the fine wire with which the machine is covered, say No. 90 wire gauze. As, however, this fine wire lasts but a short time under the action of a stiff brush, such as is used in bran-dusters, it is preferable to cover the bran-duster with wire gauze of coarser mesh, say Nos. 30 to 36, and take the out-siftings from this bran-duster and afterwards dress in a centrifugal. The latter may be covered with No. 12 or No. 13 silk. Its overtails consist of very poor stock, which is usually not worth purification, but may simply be spouted on to the last, or last but one, reduction, from where it will find its way via another centrifugal into the low-grade sack. The bran-flour thus obtained will be better than if simply dressed through the bran-duster without the aid of the centrifugal mentioned, and the quality of the bran-flour can be still further improved by using an ordinary centrifugal in the first place instead of a bran-duster. The action of the beaters of the centrifugal is less harsh, the bran-flour consequently being slightly less in quantity, but of a very superior quality. Similar results may also be obtained by dispensing with the brush of the bran-duster and replacing it by iron beaters similar to those employed by the centrifugal. The flour from the last and sometimes also from the two last reductions of middling forms a larger proportion of the low-grade flour than the bran-flour. It is a good plan to provide the last or two last centrifugals with double conveyers, so that a cut-off may be effected whenever the flour is found to become specky, thus letting what is sufficiently good go with the bakers' flour, while the remainder which has been cut off can either go straight to the low-grade sack, or may be dressed again in the last centrifugal. The centrifugals treating this low-grade stock should be very finely covered, say with Nos. 12 and 14 on foreign wheats, and 11 and 12 on English wheats. The machines should also be run at a high speed to enable them to dress this low-grade stock, the sticky nature of which is apt to clog the silk. It is hardly necessary to say that the quality of the low-grade flour will increase according to the quantity taken off, and the quality of the remaining bakers' flour will also be similarly affected.

The offals of a mill are known in various parts of England under such a diversity of names that it is somewhat difficult to find a term which will be generally understood. I will refer to offals under three headings, the coarsest being called bran, the next coarsest pollard, sometimes termed coarse sharps or seconds, and the third I call sharps, these frequently being styled "fine pollards," "middlings," "top-pings" or "thirds."

Bran. The bran should be well cleaned and brought to a uniform size. Both results will be better obtained when the extremely sharp edge of the flutings of the rolls has somewhat worn down; at the same time the fluting must by no means be blunt. Special care is essential in the case of the second break, as the bran will be injured if too much work is done at this point, while if carefully handled the grain will be opened without much damage resulting to the bran. Of course if the "short" system is used and only a limited number of breaks are employed, the operation of opening the grain must be effected in the first break instead of in the second. The condition of the last break will determine the purity of the bran. The sorting system greatly assists in making the bran of a large and uniform size, as it is not cut up by passing through a superfluous number of fluted rolls. With some millers the production of broad

bran is a matter of great consideration, a much higher price being paid in some parts of the country for large bran than for small. In such cases it is advisable to use smooth rolls with which to flatten the bran after it is cleaned. The rolls of this machine should run at almost equal speeds. If driven by gear, the slight difference in speed can be made by one or two teeth in the wheels. Bran thus flattened has a very much broader appearance than it would otherwise have, although on close examination it will be found that two or three flakes are pressed together, thus giving a somewhat deceptive appearance to the product. There is an advantage, however, gained from the use of this machine, as, if fed with a thin stream, it serves to roll out the small flakes and give them a nice broad appearance.

Coarse Pollard. This consists of small branny particles and is inclined to feel sharp, although perhaps of but poor quality. The coarse pollard should always tail over a dressing-machine and not over a purifier. It should be taken off to a sack, as high up in the process as possible, without being allowed to pass through more smooth rolls than absolutely necessary. Pollards are taken from the tail-sheet of the bran-duster or bran centrifugal, and the overtails of the coarse middlings or semolina purifiers. One rolling and one dressing are usually sufficient to clean them.

Fine sharps. The finishing of the fine sharps is an essential point in the milling process, as they appear white and frequently contain some fine dust and flour. They are generally sacked off as the tailings of the last two or three centrifugals in the system. It is a good plan to employ an offal divider to make a division between coarse pollard and fine sharps to suit the market. An old bran-duster, reel, centrifugal, or even a sifter can often be utilized for this purpose. The machine is covered so as to tail over the coarse pollard and to allow the fine sharps to come through the tail-sheet. The tail-sheet may be taken and sent to the low-grade flour, and an intermediate sheet may also be used for taking out dust, which might go back to the last reduction, but this must only be done if low-grade is taken off. It would not do to make such a return if straight-run flour is made, or if only patents and bakers' flour is taken off. A large quantity of offal is also continually accumulating from the dust-collectors, which might be spouted into the offal-divider, to be divided according to its quality and size into the various offal sacks. Any dust-collector or stive-room in a mill should be so constructed as to give up a continuous stream of dust as it is collected, not allowing it to accumulate for merely a weekly clearance.

THE SOUTH RUSSIAN GRAIN TRADE.

Consul-General Sandwith, reporting to the English government on the trade of Odessa during last year, says: The revelations made during the last years of the abuses which exist in the grain trade of Southern Russia have produced a strong feeling among the public in favor of elevators. The fame of these palatial warehouses and the splendid services they have rendered to the corn trade of America have fired the imagination of the Russian land-owner, who jumps to the conclusion that their introduction into this country will prove a panacea for the evils of which he has long been the victim. But the conditions of the trade in the two countries are widely dissimilar, and though it is hoped that by the instrumentality of elevators a better system may gradually be introduced, the day is yet far distant when anything like the regularity and expedition with which grain operations are conducted in the States can be realized in Russia. While in the former country great care is taken in the selection of the seed corn, which can be graded in five or six different classes, the farmer being thus enabled to deliver his wheat at the nearest elevator, and to receive in exchange a warrant specifying its grade, which becomes a negotiable instrument, in this country the qualities of wheat present such diversities of character as to be quite insusceptible of grading.

No scientific selection of seed corn is attempted, each farmer sowing what he has by him, so that the varieties of

wheat may be reckoned at 50 or 60, if their cardinal differences and the modifications induced by the nature of the soil in which they are raised are both taken into account. Only barley and maize has it been found at all possible to grade. It is this diversity in the kinds of wheat which renders South Russia so favorable a field for the operations of the manipulator. When a merchant has contracted to deliver a cargo of wheat, he finds it impossible to furnish all of one quality, and he accordingly employs the middleman to buy different parcels, which he mixes together until the product comes up to the required sample. It will readily be understood what opportunities are thus offered to unscrupulous agents to palm off inferior or damaged grain on their principals, who have to take extreme precautions against the fraud inevitable to the situation. While the leading export houses generally succeed in preserving their reputation, cargoes undoubtedly arrive at the home market which do not come up to the samples which are transmitted overland.

It was to protect themselves against losses to which they were thus exposed that the home merchants established in the principal English ports committees of arbitration, by the decisions of which the foreign merchant is bound by his contract to abide. When, therefore, exception is taken to a cargo as not coming up to sample, these committees appoint experts to examine the grain, in accordance with whose report they will strike off 1s., 2s., 3s., or even more per quarter, as the equity of the case may require. This single measure has had a most beneficial effect in checking fraudulent practices and in keeping the trade in a healthy condition. Nevertheless, the home merchant is seriously compromised when an unsound cargo is thrown on his hands, as he may have contracted to deliver it at a fixed rate to a miller or maltster, who will refuse to receive it as unfit for his purpose. No reduction of price can then compensate him for the loss sustained, and an expensive and harassing litigation is the probable outcome of the situation.

But it is in his dealings with the agriculturist that opportunities are furnished for the operations of the manipulator. The former is no match for the local middleman, who is to be found in every village in the double character of corn dealer and vender of spirits, and to whom he is almost obliged by his commercial isolation to have recourse when he wishes to dispose of his crops. These men are almost invariably Jews, and the columns of the Russian newspapers teem with articles exposing their chicanery and bad faith. Great allowance ought to be made for the irritation felt by Russians at seeing the profits of this lucrative business monopolized by an alien race, whose peculiar aptitude for trade renders their services indispensable for its successful pursuit. Their industry, sobriety and the small profits which they derive from the commissions they undertake amply account for the commanding position they have acquired in the trade; but their good qualities are overlooked, and their success is attributed to the grosser devices of unfair dealing, from which of course they are by no means exempt. They are in close relations with Hebrew merchants established in the towns, who transact business with the capitalists of Odessa, who again have connections with houses in Paris and London, and thus the grain trade, which was once in the hands of the Greeks, has gradually shifted to the counting-houses of the Hebrews. The Russian land-

owner, whether large proprietor or peasant, undoubtedly fails to secure the same profits from his husbandry as falls to the lot of the more fortunate American farmer, and the government, which is in full sympathy with its orthodox subjects as regards the hardships of their position, is now tentatively introducing the systems of elevators as affording the means of enabling them to sell their grain without applying to the middle-man.

The October *Century* opens with a frontispiece portrait of Joseph Jefferson, whose autobiography ends in this number. Professor Darwin, of Cambridge, England, contributes a paper of high and original value on "Meteorites and the History of Stellar Systems." "A Hard Road to Travel Out of Dixie" is the accurate title of a paper in *The Century's* new war-prison series. The present contribution is by the well-known artist and illustrator, Lieut. W. H. Shelton, of New York. "Prehistoric Cave-Dwellings" is a profusely and striking illustrated paper by F. T. Bickford, on the prehistoric and ruined pueblo structures in Chaco Canon, New Mexico, the Canon de Chelly and Arizona. The first article in this number is a pleasant travel sketch, "Out-of-the-ways in High Savoy," by Dr. Edward Eggleston. Mr. La Farge's "Letters from Japan" have for their most striking feature this month the description, in word and picture, of fishing by means of cormorants in a Japanese river. Mrs. Amelia Gere Mason closes in this number her first series of articles on "The Women of the French Salons." Miss Helen Gray Cone contributes a paper on "Women in American Literature." In fiction the October number closes Mrs. Barr's story of "Olivia," and gives a sketch by a new Southern writer, Mrs. Virginia Frazer Boyle, and a story by Miss Sarah Orne Jewett. The "Bric-a-Brac" contributors are the late John Eliot Bowen and Edward A. Oldham. Several articles have a general or special bearing on the fall elections—in the direction of reform and a wholesome independence. Mr. Henry Cabot Lodge, the Republican Congressman, strongly advocates the extension of the merit system in his paper on "Why Patronage in Office is Un-American"; and Judge Thompson, the Democratic member of the National Civil Service Commission, in an "Open Letter" shows the reasonableness of the reform. The leading "Topic of the Time" shows by a review of the political history of the country that there has always been "Partisan Recognition of the Independent Voter," and that State "calls" and conventions, and national "calls" and platforms have all along appealed to good citizens to take fresh and independent action in every election. The editor, in separate editorials, sustains the present Civil Service Commission and the citizens' movement in New York city.

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Practical Notes

CANDLES IN ALASKAN WATERS.—The ulikoo, or "candle-fish," of Alaskan waters, is about ten inches long, slender and full of oil. When a dried specimen is lighted at one end, it burns until the whole is consumed, giving a light equal to three or four candles. In seasons when they seek to ascend the streams, the natives rake them from the water and preserve them.

GENERAL NOTES.

THE United States, with only one-twentieth of the earth's inhabitants, consumes from a quarter to a half of the earth's great staples. For instance, the United States consumes 28 per cent. of the sugar, 30 per cent. of the coffee, 34 per cent. of the wool, 25 per cent. of the cotton, 34 per cent. of the India-rubber, 51 per cent. of the tin, 40 per cent. of the coal, 34 per cent. of the iron, 34 per cent. of the steel, 30 per cent. of the copper, and 35 per cent. of the lead produced yearly in the world.

INTENSE CULTIVATION.

Economists, who are predicting that the population of the earth is to outrun its capacity to support them, should study the results of intense cultivation and compute the capacity of the earth under its conditions. For instance, according to Prince Krapotkine, in an article recently published in a conspicuous periodical, 30 years ago 22 bushels of wheat to the acre were considered a fair crop in France, while the present average is at least 33 bushels on the same land, and in the best soils the crop is considered good only when it yields from 43 to 48 bushels, and occasionally as much as 55½ bushels to the acre. At Whitley, England, from 77 to 110 tons of beets have been grown on an acre, and in France for 14 consecutive years, on the same lot of land, 40 tons of fodder for ensilage, the food of four cows at least, are obtained from an acre. Paris market gardeners are able to pay \$25 rent to the acre and make a good living. They use artificial means of heating the soil, as well as the air, so as to hurry on early vegetation.

The Island of Jersey is a land of open-field culture, yet it nourishes a population of two inhabitants to each acre, and the early potato crop returns more than \$300 to each acre planted. Besides this, cereals and grass are grown for cattle, and more than one cow is supported on each acre of grass land. In addition to the enormous amount of dairy products exported, 1,500 milch-cows a year are sent away, so that an agricultural produce to the amount of \$250 an acre of the entire surface of the island, including the rocks, is obtained. Mr. Bashford, in the Island of Jersey, has vineries which cover 13 acres, and the money returns from them greatly exceed those of an ordinary English farm of 1,300 acres. The last year's crops were 25 tons of grapes, 80 tons of tomatoes, 30 tons of potatoes and 6 tons of beans. The cost of the houses is only \$2.34 to the square yard, without taking into account the pipes, and all the work is done by 36 men. A thousand loads of coke and coal are all the fuel that is required.

The Island of Guernsey nourishes 1,300 souls to each square mile of soil, which is less productive than that of Jersey, but the land is given over to market-gardening and greenhouse culture. These greenhouses are seen all over the fields and on the steep slopes of the hills, the origin of this new departure being in the production of grapes, which was started some 30 years ago. About 500 tons of grapes are annually exported now, and yet the most important crops under glass are tomatoes, potatoes and carrots. Three-fourths of an acre under glass and heated for 3 months in the spring yields some 9 tons of tomatoes and 200 pounds of beans as a first crop in April and May, to be followed by two crops more in

summer and autumn. In simple glass and plank shelters pea plants cover walls in places for a length of a quarter of a mile, and potatoes are dug in April at the rate of 5 bushels to 21 feet square.

EL POLLINO DEL MOLINERO NORDOVEST.

Perhaps the saddest emotion of the human heart is where a dear friend wanders into a graveyard, with his soul filled to overflowing, and his eyes streaming with bitter, salty tears, while he bows down and weeps for the repose of a dear departed friend, and then to watch his grief as it dawns upon him that he was weeping over the wrong grave. Much like this must have been the emotions of our dear friend, "Willie Edgar," as he wept over the relict, "La Panaderia Espagnola." He wailed over the decay of the alleged milling papers, like a mother over her lost babe, and refused to be comforted. He reflected how much better it were to die thus than live to be bold and wicked like the "American Miller," the "Roller Mill," the "MILLING WORLD," and "The Millstone"; by what providence the relict had escaped the snares and pitfalls of a life of milling journalism. It was sad. But, alas! "La Panaderia Espagnola" means "The Spanish Baker." It did not pretend to be an A. M. J. It certainly was not like "El Pollino del Nordovest," but died in honor and hope of the hereafter. It died, let us imagine, from want of sympathy from "El Molinero del Nordovest." One little Willie Edgarism, given at the proper time, when hearts were attuned, might have revived the vital spark and left many happy days for "La Panaderia Espagnola," or the little Spanish baker lad (or should we say senorita?). It was doubly sad because the lesson of tears fell upon the stony hearts of the A. M. J.'s, who laughed with soulless glee at Willie while he wept. But, Willie, one word: Look at the tombstone over the grave before you weep, take a dictionary in your pocket, and be sure you are right, then go ahead. You will save yourself annoyance, possibly chagrin. Our highly esteemed contemporary, the "American Miller," wrote you down "El Pollino del Nordovest," but it can not be blamed, seeing what you have written yourself. Willie, this was altogether the saddest episode of our lives.—*Indianapolis "Millstone."*

MILLING PATENTS.

Among the patents granted September 23d, 1890, are the following,

James H. Gunder and Wm. H. Pierce, Tolono, Ill., No. 436,854, automatic grain-weighing scales.

Wilhelm Buchholz, Cleveland, O., No. 437,087, a grinding-mill, one-half assigned to Charles Oliver Bartlett, same place.

Michael Cashin, New York, N. Y., No. 437,093, a grain-measuring device.

Among those granted September 30, 1890, is the following:

Thomas C. Jenkins, Pittsburgh, Pa., trade mark No. 18,462, the word "Vienna," a name for wheat flour.

The Humphrey Machine Company, of Keene, N. H., have received an order for clothespin machinery to be shipped to Germany, and are building a 48-inch IXL water wheel to be sent to Paris.

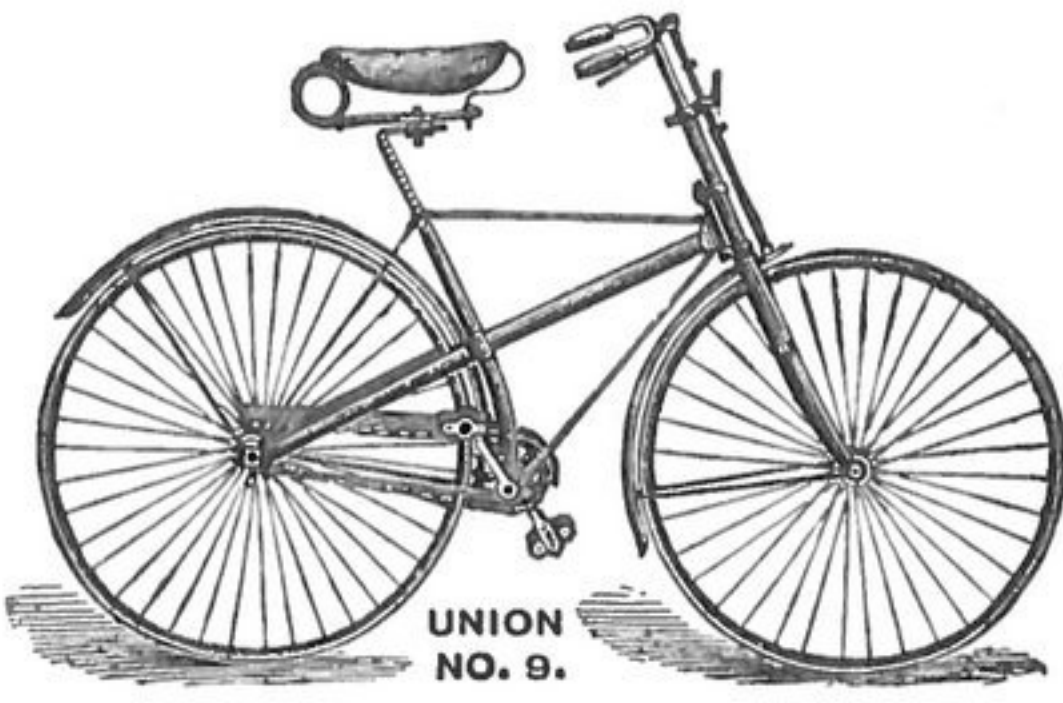
A NEW METHOD OF TREATING DISEASE.

HOSPITAL REMEDIES.

What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

This new method of "one remedy for one disease" must appeal to the common sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Medicines which are guaranteed to cure every ill out of a single bottle, and the use of which, as statistics prove, has ruined more stomachs than alcohol. A circular describing these new remedies is sent free on receipt of stamp to pay postage by Hospital Remedy Company, Toronto, Canada, sole proprietors.

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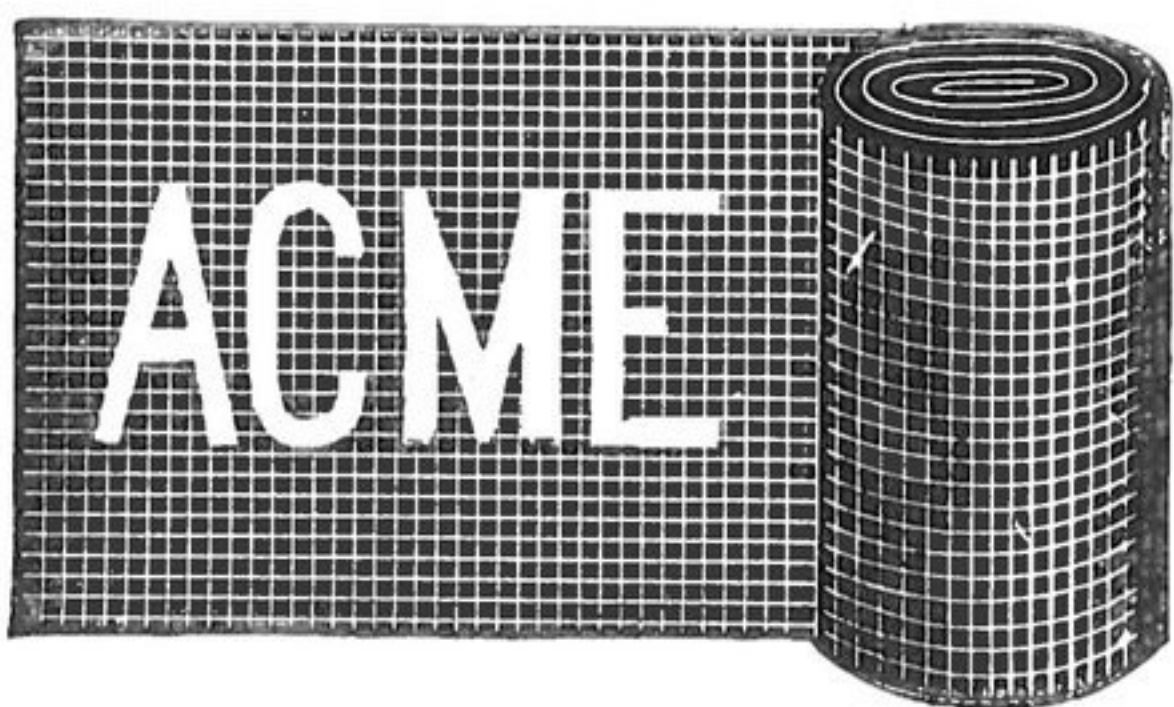
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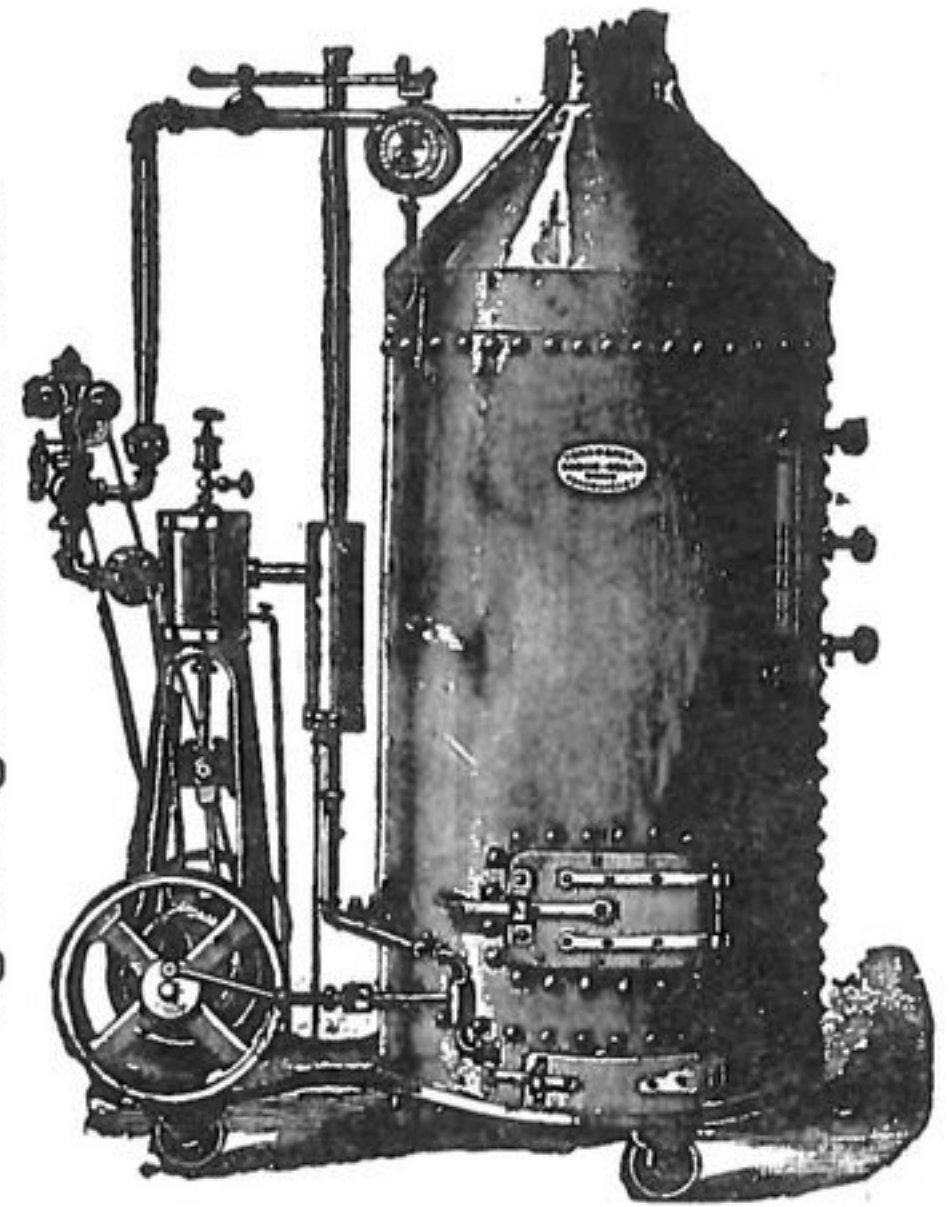
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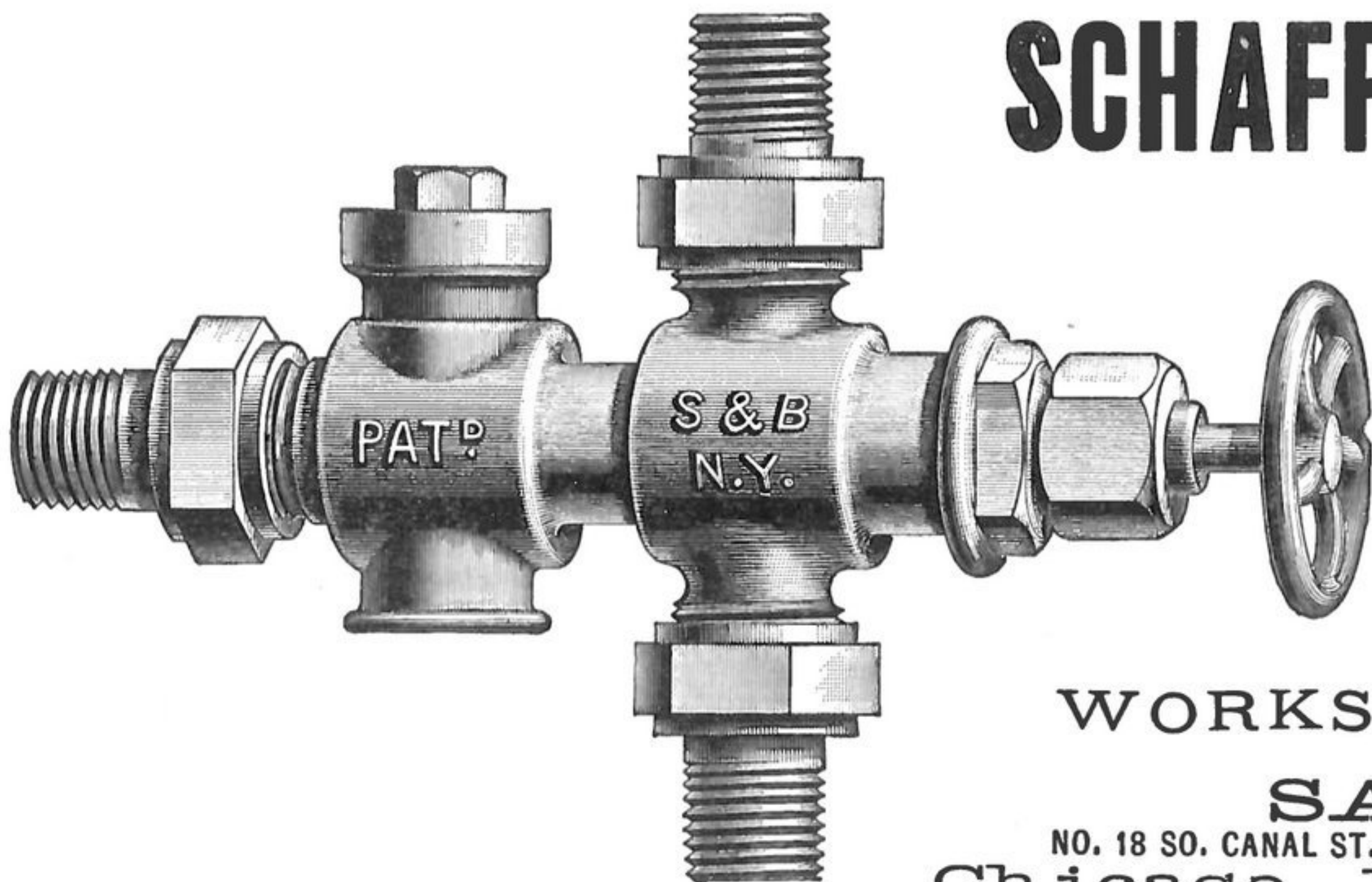
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The Cincinnati Corrugating Co.

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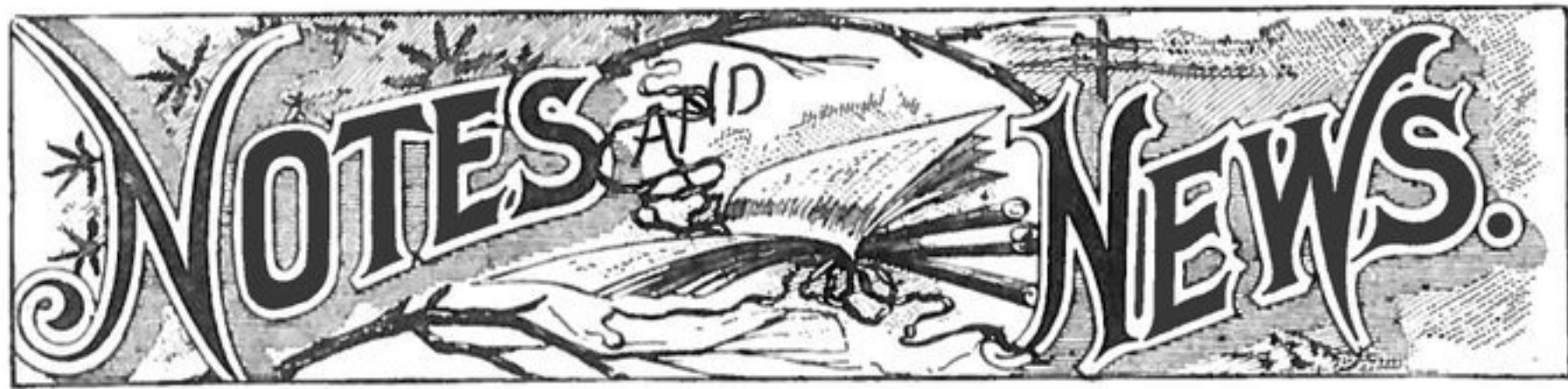
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WORKS AT BROOKLYN, N. Y.

SALESROOMS:

NO. 18 SO. CANAL ST.,
Chicago, Ill.

NO. 40 JOHN STREET,
New York.



Hylton, Tex., men built a grist-mill.
 Keith and Percy, Dayton, Tenn., build a flour-mill.
 C. L. Gunbey, Moseler's Bluff, La., built a grist-mill.
 J. Ritter & Son's grist-mill, Kearse, S. C., burned; loss \$5,000.
 M. A. Roberts, of Roberts & Co., millers, Mauch Chunk, Ia., is dead.
 S. D. McKee and others, Greenville, Va., form a stock company to build a flour-mill.

Belton Tex., men are forming a strong stock company to build a roller flouring-mill.

The Victor Mills Co., Morgantown, W. Va., will build a 40,000-bushel grain-elevator.

J. Odem's Gordon Roller Mill, Gordon, Tex., burned; loss \$30,000; insurance \$7,000.

G. W. Woodruff and others, Columbus, Ga., incorporated the Empire Mills Co., capital stock \$150,000, to build a flour-mill; machinery is wanted.

The Winnipeg Commercial of September 29th has the following in regard to the Manitoba wheat crop: "The harvest may now be considered practically completed. There will be a large quantity available for ship ments, probably the largest in the history of this province, but the quality will be decidedly below an average."

The eastward movement of flour and grain from the west through Buffalo for the month of September, 1890, shows an increase of 223,624 barrels in the receipts of flour, and a decrease of 4,690,183 bushels in the receipts of grain, estimating flour as wheat, compared with the same month last year. The following tables show the imports of flour and grain into Buffalo, by lake, for the month of September, and from the opening of navigation to September 30th, 1890, compared with those for previous years:

FOR THE MONTH OF SEPTEMBER			
	Flour, bbls.	Grain, bu.	Grain, Inc. Flour, bu.
1890.....	900,326	9,450,056	13,950,686
1889.....	676,702	15,257,359	18,640,869
1888.....	755,647	12,693,928	15,972,163
1887.....	505,565	11,229,292	13,757,177
1886.....	661,018	10,835,702	14,140,792
1885.....	424,421	8,748,328	10,870,433
1884.....	371,501	11,220,896	13,078,401
1883.....	246,863	12,945,801	14,180,116

FROM OPENING TO SEPTEMBER 30.			
	Flour, bbls.	Grain, bu.	Grain, Inc. Flour, bu.
1890.....	3,739,111	64,472,755	83,168,311
1889.....	2,956,343	62,509,670	77,291,385
1888.....	3,302,248	55,221,034	71,732,274
1887.....	2,739,493	60,746,740	74,444,205
1886.....	3,166,703	53,427,169	69,010,684
1885.....	1,606,879	37,214,208	45,248,603
1884.....	1,667,302	37,606,439	45,942,944
1883.....	1,508,154	48,657,469	56,198,419

According to a statement in Minneapolis paper, the Great Northern Railroad has issued an order supplementary to the "Mohler order," so called in relation to the shipping of wheat to elevators not directly on the tracks of the company. It makes the following restrictions: "Delivery will be made at your request to elevators or points reached by the tracks of the Great Northern railway line or by tracks over which it has a right to move its cars by its own locomotives, or by transferring wheat at your expense into another car or to teams, to be provided by you, at a convenient point upon or along the tracks of this line at this station for such purpose. Disposition in one of the ways above named must be given be-

fore 4 p. m. of the day on which this notice is received, if the same shall be received before 9 a. m. If received after 9 a. m., then before 4 p. m. of the following day; otherwise the wheat will, after inspection and weight by the proper State officials, be delivered to and placed in an elevator or warehouse in the name of the Great Northern railway line subject to your order upon payment of all proper charges." This does not strike the Minneapolis grain men as being in the nature of a concession to them. Under the general order as first promulgated they had a certain time to remove their wheat, conditional upon demurrage charges after the first 24 hours. Now the grain must be removed within 24 hours or be liable to be dumped into the elevator most convenient to the railway people. There is no leeway as before. The result is that wheat along the Great Northern is selling from 1 to 2 cents less than other grain on change.

COMMENDATORY COMMUNICATIONS. THEY LIKE THE ALLFREE MILL.

NEW SHARON, IOWA, Feb. 10, 1890.

THE J. B. ALLFREE CO., INDIANAPOLIS, IND. GENTLEMEN: We have had your mill in operation since November, 1886. It is an 80-barrel mill, and put up in splendid style and finish. The workmanship is perfect in every respect, and all our machinery runs with the greatest ease. Our engine is an "Allfree Automatic," and it is a "daisy." It plays all day long and takes but little fuel. We would sooner have it than a Corliss, and think it quite as economical. Our entire mill outfit is first-class, and is made by The J. B. Allfree Company, of Indianapolis, Ind. The shaker-scalper is a success, and does better work than a reel scalper, and runs easily with a three inch belt. We wish all intending to build mills could pay us a visit, so that we could show them all the good points of our mill, for to see is to be convinced of its superiority. Our mill does good work, and we can say that we have had no choke-up, and no belt to change since we started. We can fully recommend The J. B. Allfree Company in every respect to millers wishing to remodel their mills.

NEW SHARON MILL CO.,

R. D. HIGH, Manager.

JAMESTOWN, IND., Sept. 10, 1890.

THE J. B. ALLFREE CO., INDIANAPOLIS, IND. GENTLEMEN: We have been running the mill you built here since February last and can say we do not regret having given you the contract for rebuilding it for us. We thought our mill, which was burned, a good one, but you have certainly improved on it, as we make a better clean-up if possible than the old one. Our flour compares favorably with that of other mills making four or five times as much low grade of flour, and we are only making two or three per cent. with a very inferior grade of wheat. The machinery and workmanship are first-class throughout, and certainly requires as little power to run it as any mill of the same capacity.

THE JAMESTOWN MILLING CO.

CATARRH.

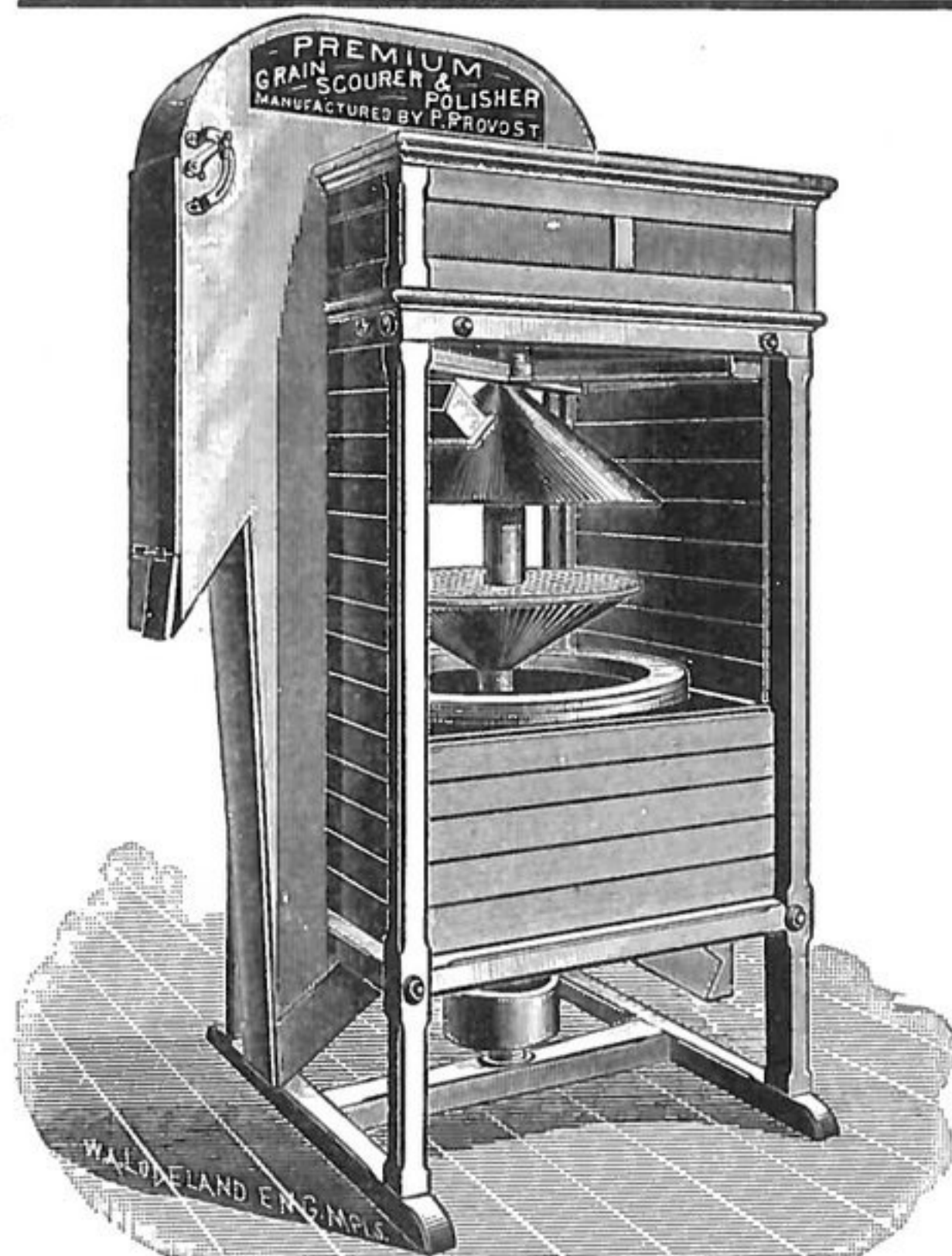
CATARRHAL DEAFNESS—HAY FEVER.

A NEW HOME TREATMENT.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King street, Toronto, Canada.—*Christian Advocate*.

Sufferers from Catarrhal troubles should carefully read the above.



THE PREMIUM GRAIN SCOURER AND POLISHER.

This machine is guaranteed to do more and better scouring than any other machine in existence. Is easily set up, requires little or no care, except oiling.

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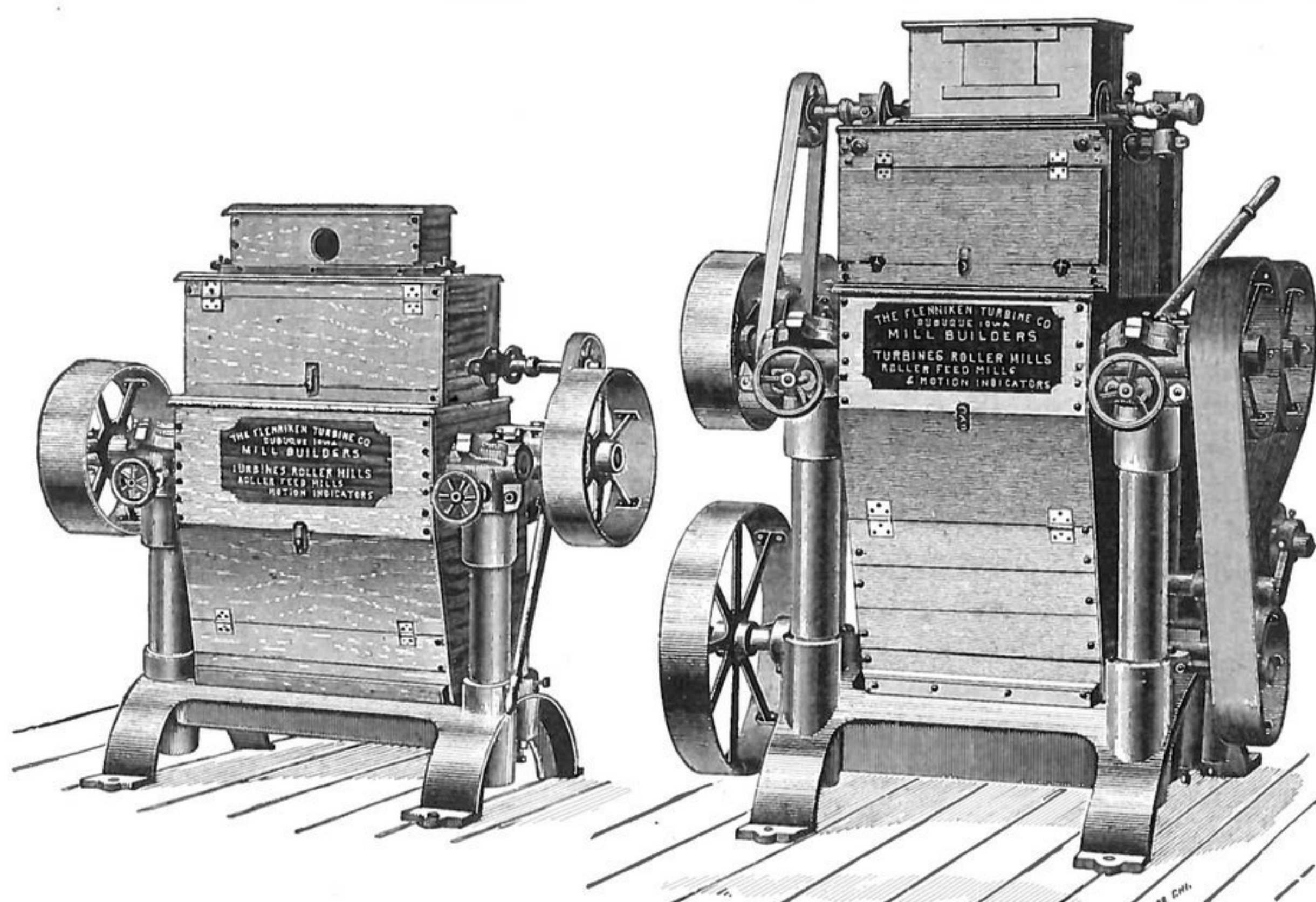
MINNEAPOLIS, MINN.

ONE REDUCTION TO THE FRONT!

*Ye jolly millers, one and all,
Who granulate with burrs,*

A Moses has Come to Deliver You from Egypt. Cease Trying to Make Bricks without Straw. The Red Sea of Expense Has Been Divided.

The Wilderness of Reductions has Been Shortened. There is Manna in Abundance for Those Who Believe. Listen to the Glad Tidings of Great Joy!



ONE REDUCTION ON ROLLS IS A SUCCESS! Two years of experience in a dozen States, with all kinds of Wheat and diversified climates, has justified us in recommending its adoption in place of burrs in each and every case, whether for grinding Wheat, Rye or Buckwheat. We have perfected Roller Mills, Bolts and Scalpers peculiarly adapted to the wants of Small Mills, and all our machines *infringe no patents*, and no claims are made that they do.

Having consummated a bargain with **MR. O. C. RITTER**, the author and patentee of **One Reduction**, which gives us the *exclusive right* to construct mills under his patents, our patrons in the future will receive a license from Mr. Ritter.

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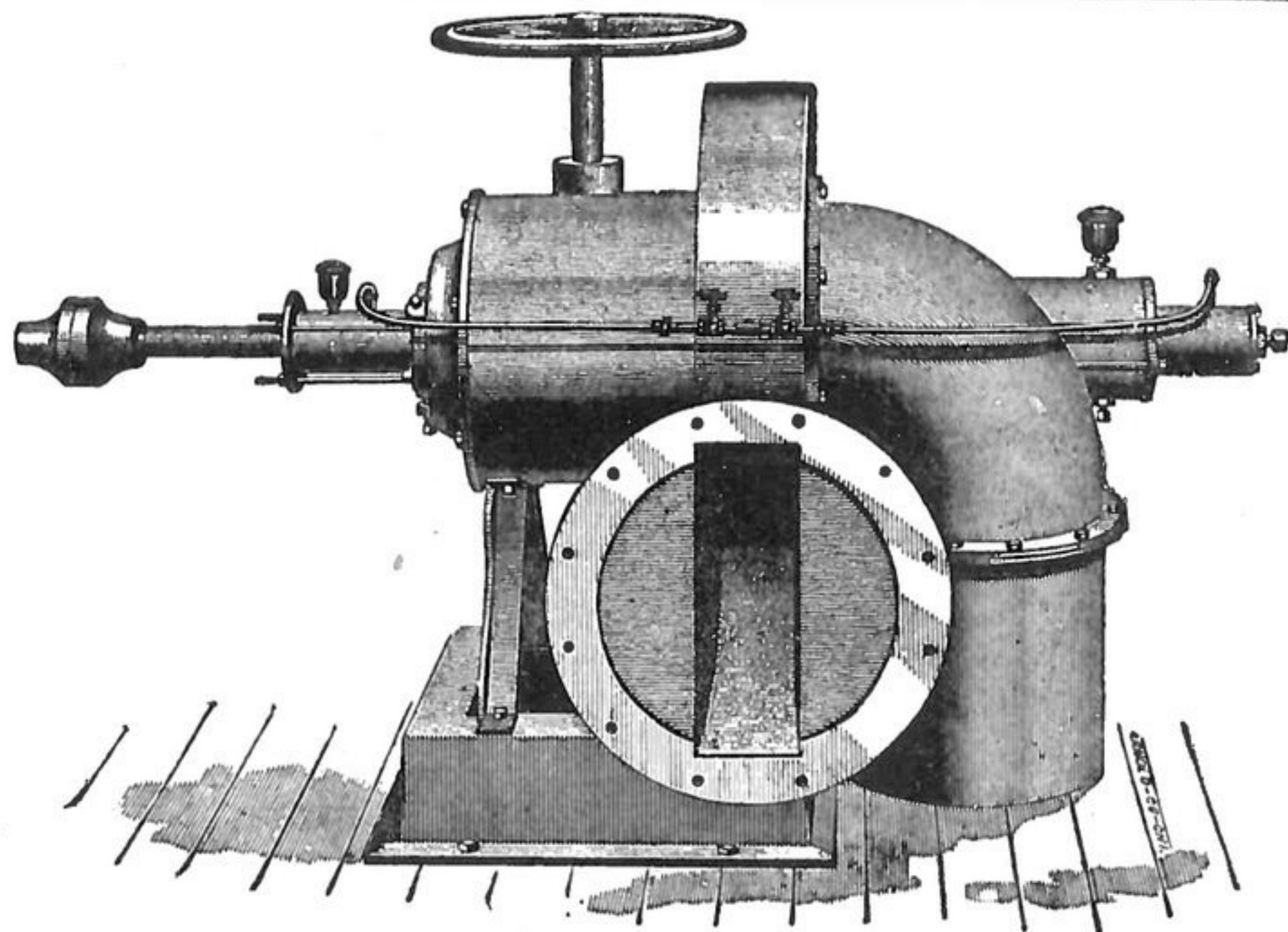
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DUBUQUE, - IOWA.

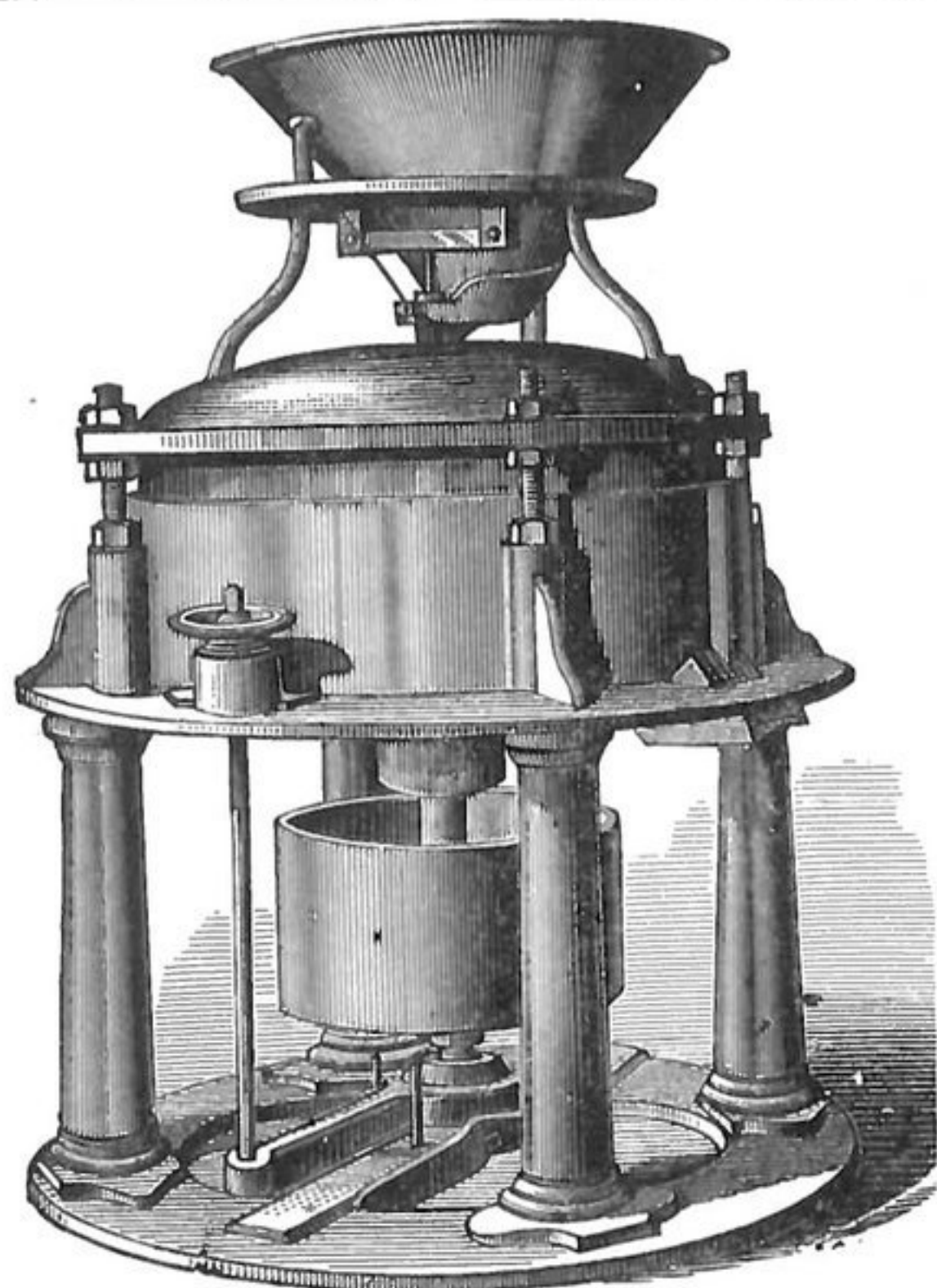


EUROPEAN ECHOES.

It is announced from Novo-Rossiesk, on the Black Sea, that among the places M. Vishnegradsky, the Russian Minister of Finance, intends to visit after his tour in Central Asia, is the new port of Novo-Rossiesk. About two years ago this little Black Sea town, which is now a thriving port with 5,000 inhabitants, was mainly a small village garrisoned by a few soldiers. Since it has been connected by a branch line with the Vladikavka Railway the prosperity of Novo-Rossiesk and all connected with it has increased by leaps and bounds. This prosperity has not been accomplished without the expenditure of many millions of roubles, which have been spent in boring tunnels through the mountains lying between Novo-Rossiesk and the grain district of the Kuban, which produces about 35,000,000 bushels of grain a year. Between August, when the port is opened, and December, 1888, about 1,532,000 bushels of grain were exported in 19 steamers, most of which were British. Novo-Rossiesk possesses one of the finest harbors in the world, while its harbor dues are at present exceedingly low. It is many times larger than that of Sebastopol, and is open all the year round. Although it has only been open such a short time, its grain export equals that of Rostoff and is twice as large as that of Libau and Riga. This year the export will even exceed that of Sebastopol and Nicolaieff, although the harvest prospects are not so good as usual, owing to the great heat that prevailed this summer throughout the Caucasus and South Russia. The rapid rise of the port is due to the enterprise of the Vladikavka Railway Company, and not to the Government or the officials, who, indeed, if report be true, have thrown all kinds of obstacles in the way of the company. It has built large wharves, elevators and granaries, while the grain-shoots where the ships lie alongside are supplied with the electric light, so that in case of need vessels can load at night without loss of time. Immense warehouses, capable of containing 234,000 bushels of grain, have been built for the convenience of growers, who now send their goods down to the warehouses and receive advances on them. The company also intends, the Government permitting, to build two docks fronting the bay.

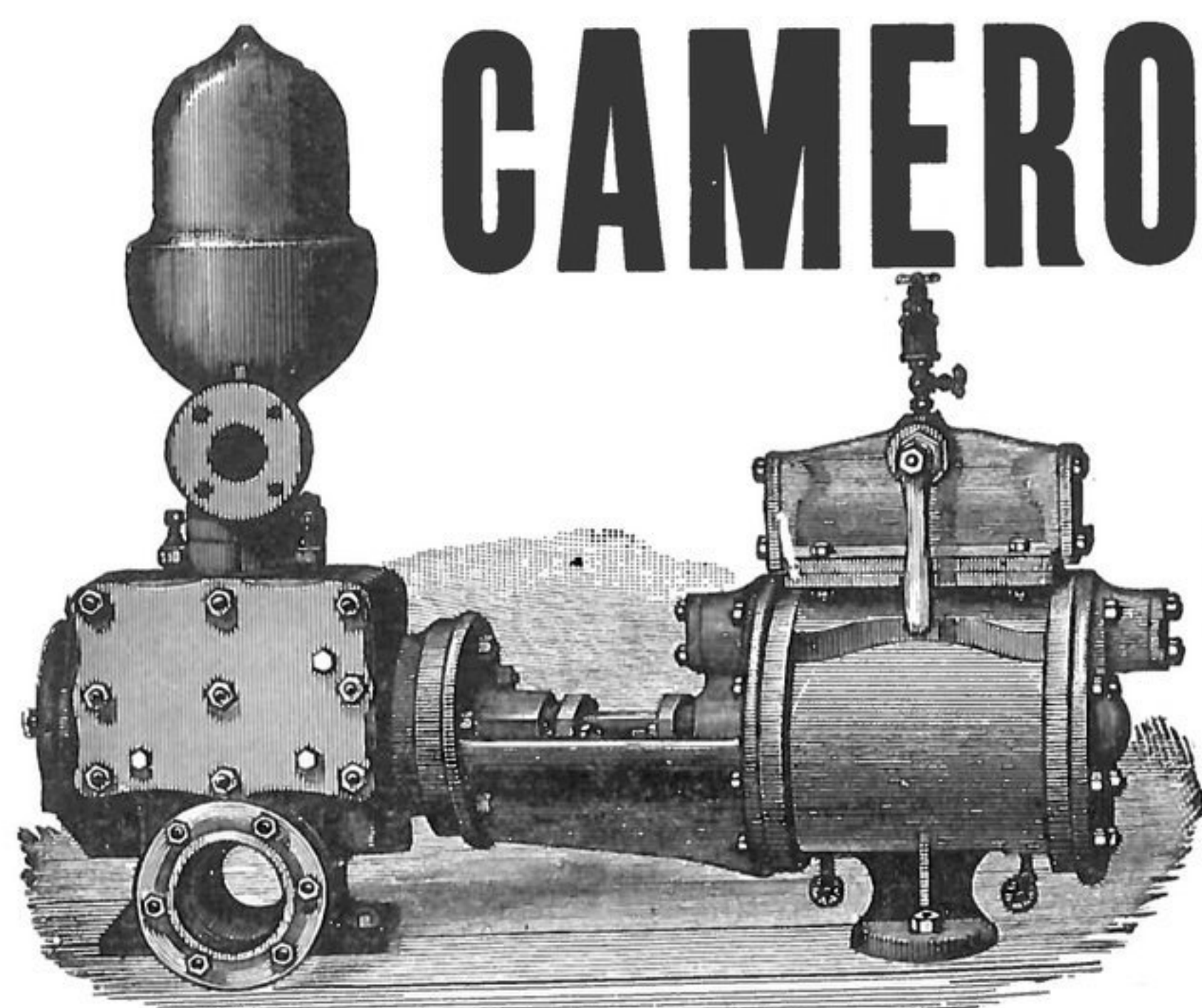
SAYS a London letter of the 20th of September: At the local fairs and exhibitions that are now being held or that have lately been held, in various British cities, American Indian corn has been put on show in very attractive ways, and novel projects have been got up to secure its introduction as an article of diet for the British people. There can be no doubt that, if the efforts now being made to promote the consumption of Indian corn here are successful, a new and profitable market for the most important crop of the United States will be established, and the prosperity of the millions of Indian corn raisers in America will be greatly increased. The State of Nebraska sent a Commissioner, Charles J. Murphy, to the Edinburgh Exposition of this year as an official representative of the corn interests of that State. Commissioner Murphy adopted plans and actions in Edinburgh that soon gave promise of being far more successful than those he had been able to put in practice at the International Exposition in Paris. He then undertook, for the first time on foreign soil, to give practical proofs of the value of maize as food for mankind. Not only did he display before the multitudes at the Exhibition the verdant stalks as they grow in American soil; not only did he give lectures for the edification of his hearers; not only did he display the corn on the cob and the corn-meal from the mill; not only did he tell of the hundred ways in which it may be prepared for the table, but he also cooked the food in the presence of the public in a great variety of methods, and served it, at nominal prices, to all visitors who could be induced to try any of his preparations. A visitor under the Commissioner's direction at the Edinburgh Exhibition could munch the corn from the cob, or sup mush with milk, or enjoy corn dodgers, or test the taste of popcorn; he could get baked mush, fried mush, croquettes of mush or hasty pudding; he could get hominy, fried or baked, coarse or fine; he could get hominy

waffles, hominy fritters, hominy muffins, hominy turnovers, hominy pudding, or baked hominy; he could get five kinds of corn bread, besides ash-cakes, hoe-cakes, johnny-cakes, corn-pone, or scones; he could get corn-meal crumpets or griddle cakes, crackling bread, doughnuts, flapjacks, snappers, puffs, or gems; he could get a score of varieties of corn puddings and desserts; he could get green corn boiled or broiled, corn soup, corn chowder, corn omelet, or popcorn balls. In short he saw with his own eyes that corn could be prepared for his consumption in more ways than there are weeks in the year. The display of corn and of the preparation of it, and of the dishes made from it, at the Exhibition was a revelation and a wonder to the multitude of onlookers and consumers. Few of them had previously any knowledge of its value as food for young and old, rich and poor. Very few of them had ever before tasted any of the preparations of it, or possessed any idea of the nourishing and delectable nature of many of these preparations. Commissioner Murphy's practical method of commending American Indian corn to the British people, so that it shall become a staple article of food in their households, has many advantages, and there need be no doubt that its results will be made manifest as he pursues his labors from one part to another of the kingdom, as he finds opportunity at fairs or exhibitions. There is surely a growing interest here in Indian corn as a means of supplying the popular demand for cheap, wholesome, nourishing grain, and America can furnish it in any needed quantity at less than one-half the price of wheat. The Nebraska Commissioner holds that when once the people of the various countries of Europe know the real worth of Indian corn, which they had not learned since the discovery of America, there will be a prodigious demand for it, and that this will not only be advantageous to the American corn raiser, but will also aid in the re-establishment of the American commercial marine. Commissioner Murphy's lectures on this subject are full of interest and information, especially when he illustrates them with displays of practical cookery. In addressing an audience recently he said that there are 5 distinct species of corn, and that at the New Orleans Exhibition there were 75 varieties from Nebraska. He presented scientific as well as commercial views of the corn question, showing both the nutritive qualities of the grain and the vast volume of its production, the latter being indicated by the statistics which tell that the ascertained crop of last year in the United States was 2,000,000,000 bushels, only about 4 per cent. of which was exported to foreign countries. He described how bountifully yet cheaply the people of Europe could live on this corn, which contains as much actual nourishment as the best wheaten flour, oatmeal, or any other highly farinaceous cereal. He told how largely it was consumed by the people of Mexico and the Western States of the American Union, and advised the people of Europe to follow their example. He rose to poetic heights in quoting from Longfellow's "Hiawatha" the stanzas in which the "maize fields green and shining" are described. He said that one of the objects of his mission abroad was "to endeavor to introduce the use of corn food into the armies of Europe, which would cause the saving of a fabulous amount of money annually." In truth, the Commissioner's lecture, from its opening to its close, threw new glory upon the Indian corn fields of America. "Yet," the Commissioner said, "I am no corn dealer or corn grower, have no pecuniary interest in the grain, and receive no subsidy from any quarter whatsoever. I feel that I can be of no greater service to the toiling millions of the world than by instructing them as to the best means of procuring the cheapest and most nutritious food." Commissioner Murphy has prepared a pamphlet, in which he gives not only his lecture before the International Congress of Millers at Paris, but also over 100 formulas for the preparation and cooking of corn, besides much other serious matter. There is now a growing interest in the Indian corn question in Great Britain, and some references to it have recently appeared in the papers. One of the writers on the subject argues that, if there should at any time hereafter be a heavy demand for the grain in Great Britain, the supply would be obtained from the East Indies, where the ryots can raise it even more cheaply than it can be raised by the farmers in the Western States of the American Union.



MUNSON BROS., UTICA, N. Y.,
—MANUFACTURERS OF—
PORTABLE MILLS
FOR CORN AND FEED GRINDING,
—WITH—
FRENCH BUHR and ESOPUS STONES
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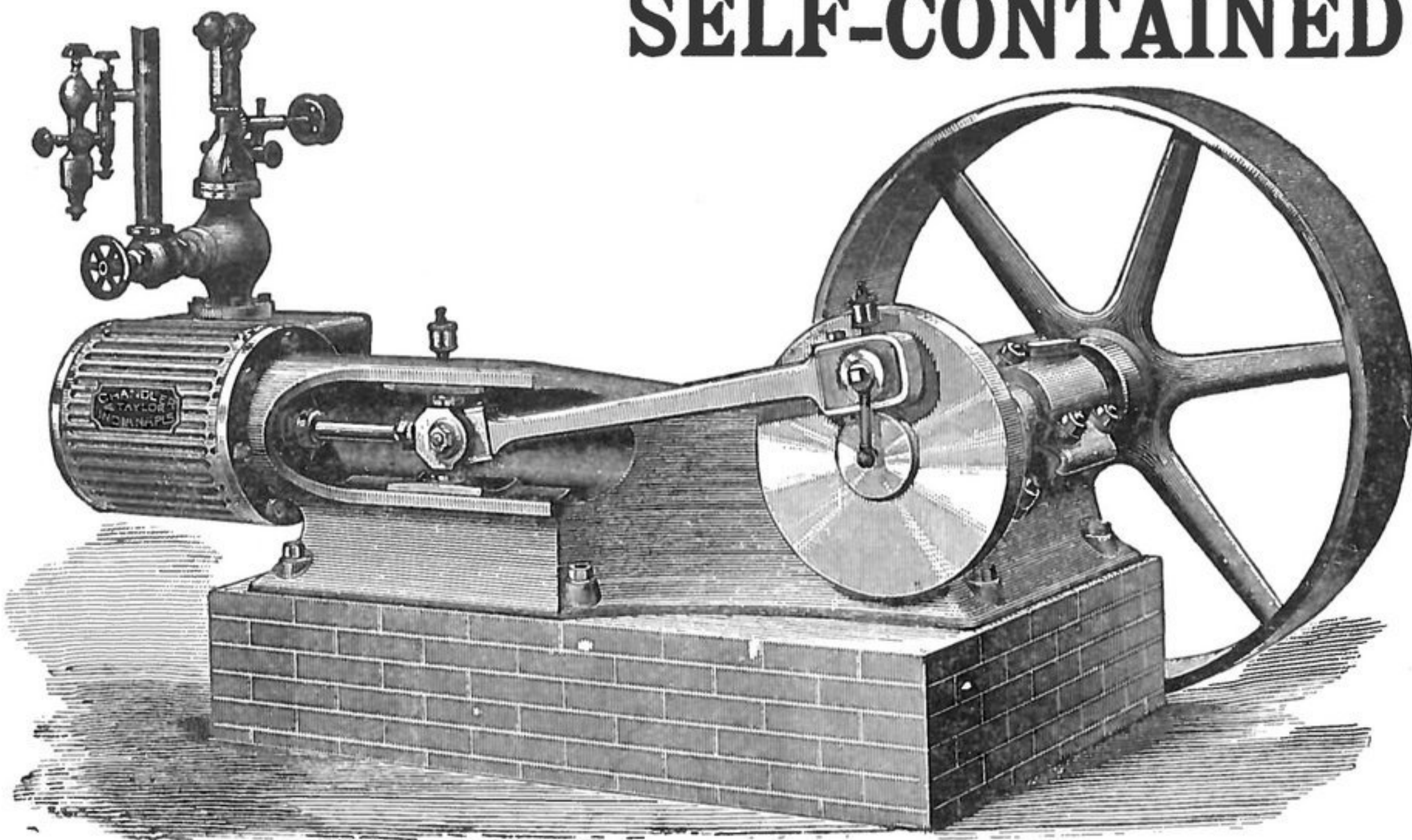
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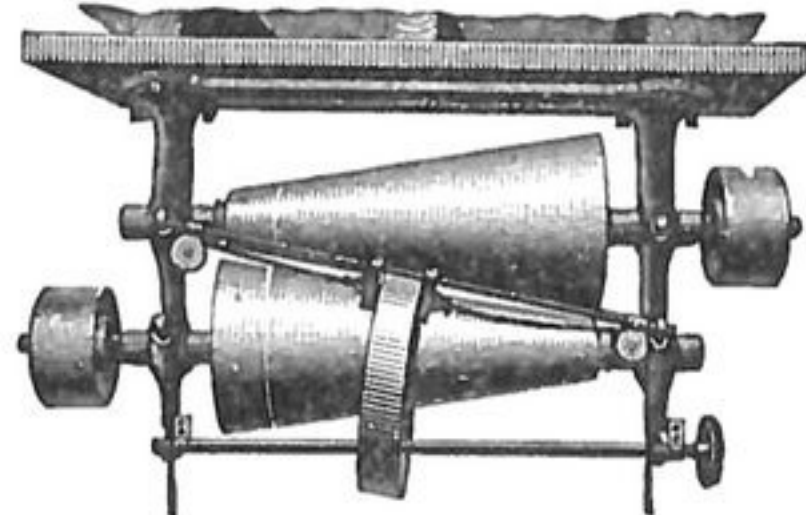
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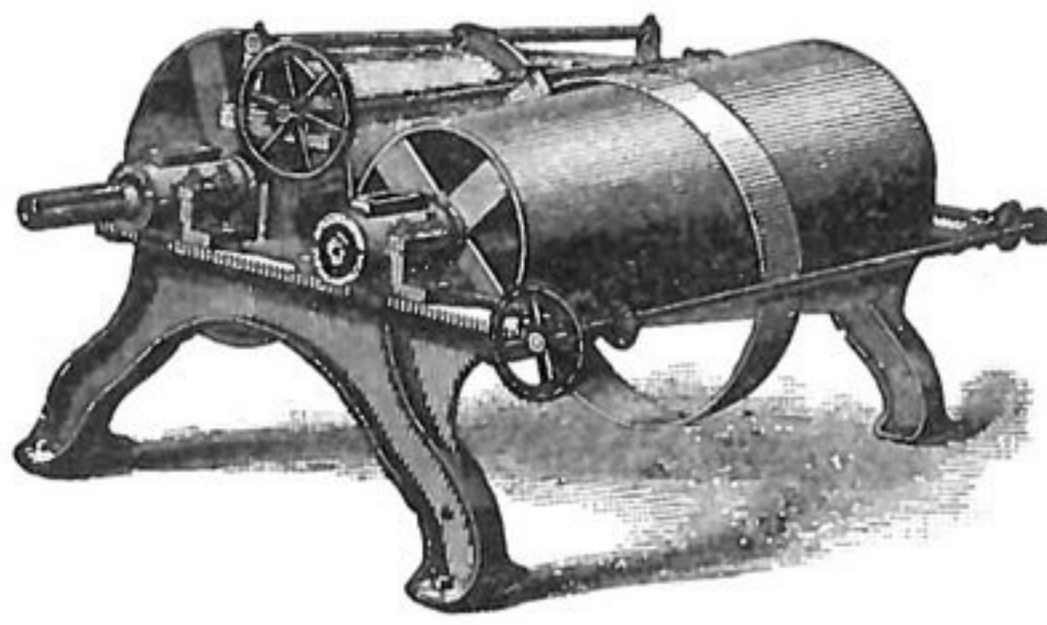
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CAN SAVE TIME
AND TROUBLE
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BY USING
**BARLOW'S
PATENT
MANIFOLD
SHIPPING
BLANKS.** SEND FOR
SAMPLE SHEET & PRICES
BARLOW BROS. GRAND RAPIDS, MICH.



OFFICE OF THE MILLING WORLD,
BUFFALO, N. Y., Oct. 4, 1890.

Friday of last week was a day of dull, narrow and irregular markets, with a scalping trade led by Hutchinson in Chicago. In New York September wheat closed at \$1.01½, with Atlantic port receipts 8,456, exports 6,050, and options 1,464,000 bushels. Russian wheat shipments were reported more liberal in consequence of a decline of 5 per cent. in the value of the rouble, and the result was a weakness in the British market. September corn closed at 55½c., with receipts 96,842, exports 119,788, and options 856,000 bushels. September oats closed at 44¾c., with receipts 87,226, exports 15,887, and options 115,000 bushels. Wheat flour was dull and 5@10c. lower on all grades above \$4. Receipts were 4,845 sacks and 28,394 barrels, and exports 14,657 sacks and 26,584 barrels. The other lines were quiet.

Saturday brought dull, steady and featureless markets. September wheat closed at \$1.01, with receipts 20,419, exports 3,217, and options 960,000 bushels. Cables were generally lower. September corn closed at 55½c., with receipts 185,147, exports 29,350, and options 408,000 bushels. Warm and favorable weather in the corn belt. September oats closed at 44c., with receipts 143,477, exports 20,630, and options 30,000 bushels. Wheat flour was dull, weak and unsettled on all grades above \$3.90. The other lines were featureless. Wheat reports from Manitoba were bullish in tenor, indicating a very small crop of No. 1 Hard wheat, and telling of serious damage to the whole crop by the heavy rains in harvesting.

Monday brought a higher opening, followed by dullness and easiness generally. September wheat closed at \$1, with receipts 25,934, exports 6,281, and options 960,000 bushels. Indian wheat shipments were reported very light, and northwestern receipts were light. September corn closed at 55½c., with receipts 291,088, exports 127,257, and options 744,000 bushels. September oats closed at 44½c., with receipts 238,428, exports 18,270, and options 225,000 bushels. Wheat flour was dragging and heavy. Sales were small. Receipts were 9,097 sacks and 32,310 barrels, and exports 3,760 sacks and 17,235 barrels. The other lines were quiet and featureless. The visible supply in the United States and Canada was:

	1890. Sept. 27.	1889. Sept. 28.	1888. Sept. 29.
Wheat.....	16,829,828	17,853,213	31,509,963
Corn.....	8,639,264	12,933,598	10,018,620
Oats.....	4,123,640	5,739,612	6,714,980
Rye.....	576,371	1,552,456	834,403
Barley.....	2,381,676	585,559	364,438

Tuesday brought active and higher markets, with Hutchinson leading the buying of the whole list. October wheat closed at \$1.01½, November at \$1.02½, December at \$1.04½, January at \$1.05½, and May at \$1.08½. Receipts were 60,470, exports 3,423, and options 3,440,000 bushels. European cables reported fine weather for the bears, and Russian war preparations on the Armenian frontier for the bulls. Corn was the subject of a big manipulation in Chicago by "Old Hutch," who on Monday bought heavily of "calls" at ½c. over the price at which he had kept them for a week, until the crowd thought it would be a good thing for them to sell them too and "copper old Hutch." Tuesday morning he opened the ball and ran prices up to 51c. on May corn before noon, from 50¼c. Monday night and called the corn, while the shorts climbed over one another to cover and the other markets followed. In New York October corn closed at 55½c., and May at 57½c., with receipts 333,134, exports 29,333, and options 4,160,000 bushels. October oats closed at 44c., and May at 46½c., with re-

ceipts 156,853, exports 21,304, and options 370,000 bushels. Wheat flour was slightly firmer with wheat, and it was advertised that an advance of 10c. a barrel in freight would be made from the West, but buyers would not be driven in to buy. Receipts were 10,785 sacks and 41,749 barrels, and exports were 1,225 sacks and 10,468 barrels. The minor lines were firm and quiet.

The following shows the amount of wheat and flour, together with the amount of corn on passage to United Kingdom, for ports of call or direct ports for the weeks mentioned:

	1890. Sept. 30.	1890. Sept. 23.	1890. Oct. 1.
Wh. & flour, qrs.	2,221,000	2,298,000	1,475,000
Corn, qrs.....	568,000	561,000	445,000

The following shows the amount of wheat and corn on passage to the Continent for the past week, the previous week, and for the same week last year:

	1890. Sept. 30.	1890. Sept. 23.	1889. Oct. 1.
Wheat, qrs....	770,000	695,000	290,000
Corn, qrs.....	144,000	122,000	101,000

India wheat to United Kingdom..... 20,000
India wheat to Continent.....

The imports into the United Kingdom for the past week and the previous week and for same week last year:

	1890. Sept. 30.	1890. Sept. 23.	1889. Oct. 1.
Wheat, qrs.....	366,000	552,000	363,000
Corn, qrs.....	210,000	211,000	143,000
Flour bbls.....	144,000	260,000	144,000

Wednesday was a day of less active, lower and irregular markets, with Hutchinson in Chicago reversing his action of Tuesday and selling out on the whole list. October wheat closed at \$1.01½, with receipts 23,122, exports 10,143, and options 4,040,000 bushels. October corn closed at 55½c., with receipts 99,870, exports 143,112, and options 1,280,000 bushels. October oats closed at 43¾c., with receipts 150,263, exports 20,145, and options 385,000 bushels. Barley was firmly held at 75@85c. for Western, 77½@78½c. for Milwaukee, 95@96c. for No. 1 Canada, and 90@91c. for No. 2 extra. Malt was firm and dull as follows: 75@82½c. for two-rowed, 80@85c. for six-rowed, 85½@92c. for country-made Canada and 92½@1.00 for city do. Mill-feed was dull and unchanged. Quotations: 40 lbs. 80@82c.; 60 lbs. 82@85c.; 80 lbs. 85@87½c.; 100 lbs. \$1.05@1.10.

Wheat flour was duller and easier, but no lower to buy. Millers held steadily. Sales included winter clear and straights at \$4.85@5.10. There was some export inquiry for No. 1 spring at 24s. 9d. c. i. f., London, with 25s. asked. Pennsylvania patents sold in small lots at \$5.00 @5 35 for fair to choice. The best St. Louis patents were bid \$5.50 and held at \$5.65; sacks spring bakers' at \$4.12½, spot, for export; No. 1 winter at \$4.35 in bbls. Car lots fancy straight winter sold as high as \$5.25, but standard brands were not over \$5.10@5.15, and very fair flours were bought at \$5; winter straights \$5.00 @5.15; bakers' springs \$4.70. West, broken car lots fancy Minneapolis sold at \$6.00@6.10 for patents; city mills in lots, old and new barrels, \$5.00@5.15. Later, sales were more liberal; new spring patents to arrive at \$5.15@5.25 for soft up to \$5.50 for choice; city mill patents at \$5.50@5.55; West India city mills at \$4 85; winter straights at \$5.00@5 15; winter patents at \$5.25@5.50 for fair to choice; No. 1 winter

in bbls. at \$4.30@4.35; No. 2 do at \$3.90@4.10; superfine winters at \$3.50@3.75, all in barrels. Liverpool has in stock 106,000 sacks of flour, 1,407,000 centals of maize and 2,332,000 centals of wheat.

Rye flour was higher at \$3.90@4.00 for standard brands. Buckwheat flour was dull, with New York City millers pulling out of the market, having all they will need until November. Sales of new were made at \$2.60@2.80, and "choice old" at \$1. Corn products were dull all around at the following quotations: Brandywine \$3.20; Southern and Western \$2.95@3.20; granulated yellow \$4.45; granulated white at \$4.70. Bag meal—Coarse \$1.06@1.09; fine yellow \$1 16@1.21; fine white \$1.21@1.26; Southern 99c@1.49 for the whole range; brewers' \$1.51@1.61.

Thursday brought no decided changes in market conditions. October wheat closed at \$1.01½, with receipts 46,000, spot sales 78,000, and options 1,496,000 bushels. October corn closed at 55½c., with receipts 204,000, exports 49,000, and options 1,440,000 bushels. October oats closed at 43¾c., with receipts 54,000, spot sales 136,000, and options 315,000 bushels. The minor lines were all quiet.

Wheat flour was active and unchanged, with receipts 15,000, and sales 18,000 packages. Quotations included: Low extras \$3.35@3.85; city mills \$4.85@5.10; city mill patents \$5.25@5.85; winter wheat low grades \$3.35@3.85; fair to fancy \$3.90@5 25; patents \$4.50@5.65; Minnesota clear \$4.85@5.15; straight \$4.65@5.50; Minnesota straight patents \$5.15@6.00; rye mixtures \$4.35@4.90; superfine \$2.85@3.85.

BUFFALO MARKETS.

Buffalo, N. Y., October 3, 1890.

The market is generally steady. Fluctuations are narrow. WHEAT—Sales were made at \$1.07½ for 1,200 bu. No. 1 hard, \$1.01½ for 9,201 bu. No. 1 Northern, and \$1.01½ for 5,000 bu. do, 95c. for 16,000 bu. No. 2 Northern, \$1.06 for 3,000 bu. sample Chicago c. i. f., and \$1.00½ for 1 car of extra No. 2 white winter wheat. CORN—Prices closed about ¼c. below yesterday's close, No. 2 yellow being quotable at 53c, No. 3 yellow at 52½c, No. 2 corn at 52½c, and No. 3 corn at 52c. in store. Sales were reported at these prices. OATS—Prices remain very steady. Sales were made of No. 2 white at 43½c, 43¾c, and 44c; No. 3 white are quoted at 42½c, and No. 2 mixed at 41½c on track. BARLEY—Little is being done just now. Good Michigan barley sells at about 68@72. Canada is held at 80@87c for No. 2 to No. 1 RYE—The market is entirely nominal at 66@68c for No. 2. OATMEAL—Akron, \$6.45; Western, \$6.20 per bbl; rolled oats, in cases, 72 lbs, \$3 10. CORNMEAL—Coarse, \$1.00@1.05; fine, \$1.05@1.10; granulated \$1.60 per cwt. MILL-FEED—City-ground coarse winter, \$17.00@17.50 per ton; fine do. \$17.50@18.00; finished winter middlings, \$.....@20.00; coarse spring do, \$19.00.

FLOUR MARKET.

Spring Wheat.	Winter Wheat.
Patents..... \$6.25@6.50	Patents .. \$6.25@6.50
S't Bakers' .. @5.75	S't roller .. 5.25@5.50
Bakers' cl'r .. @5.25	Amber .. 5.00@5.25
B. Rye mixt .. @4.75	Crck'r flour.. 5.00@5.25
Low Grades .. @3 50	Low grades.. 3.25@3 50
Rye flour .. 3 50@3.75	Graham .. 4.75@5.00

Retail prices 50c. above these quotations.

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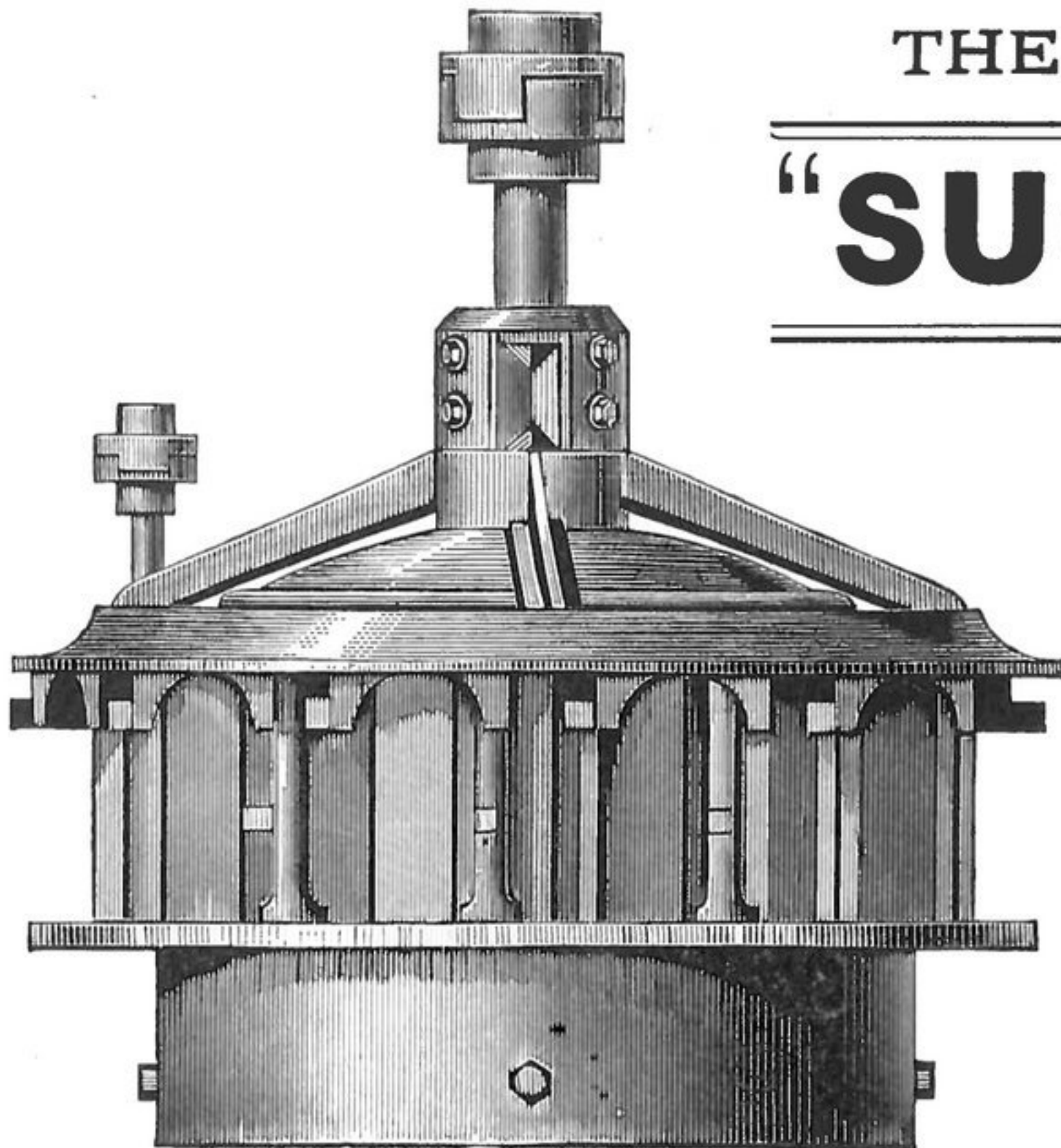
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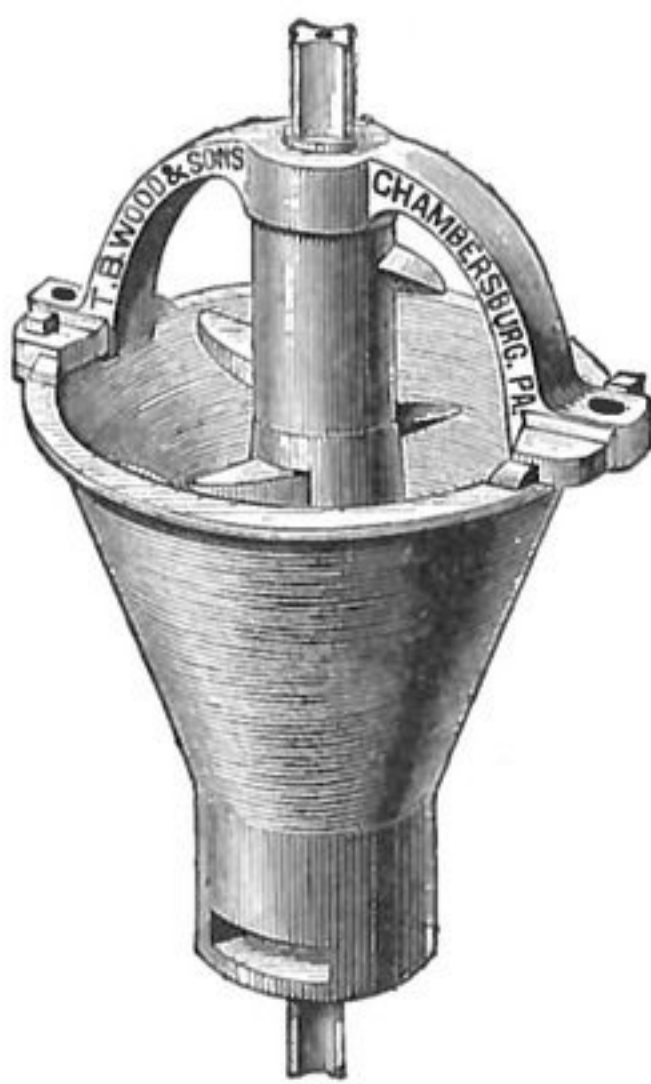
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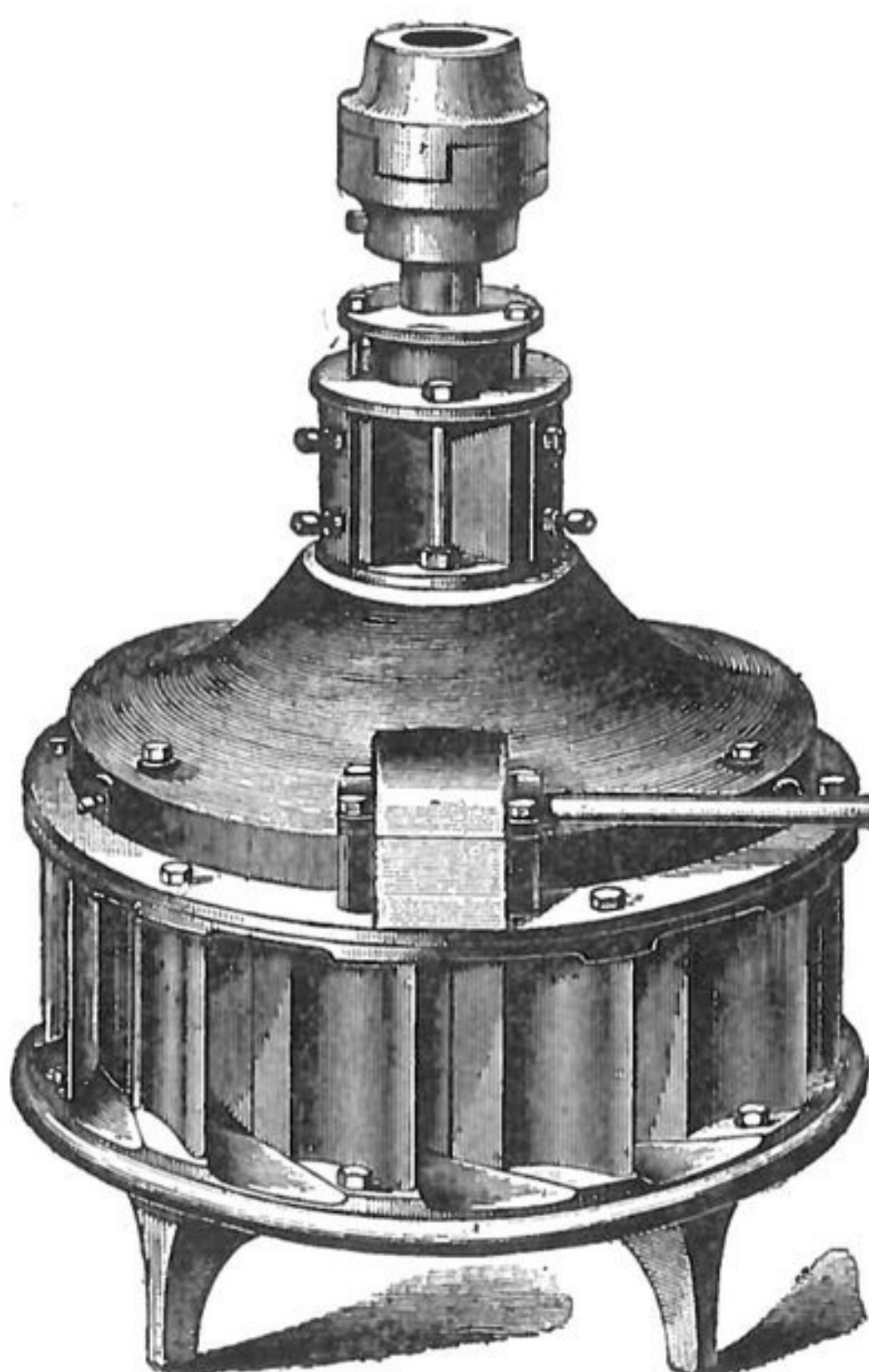


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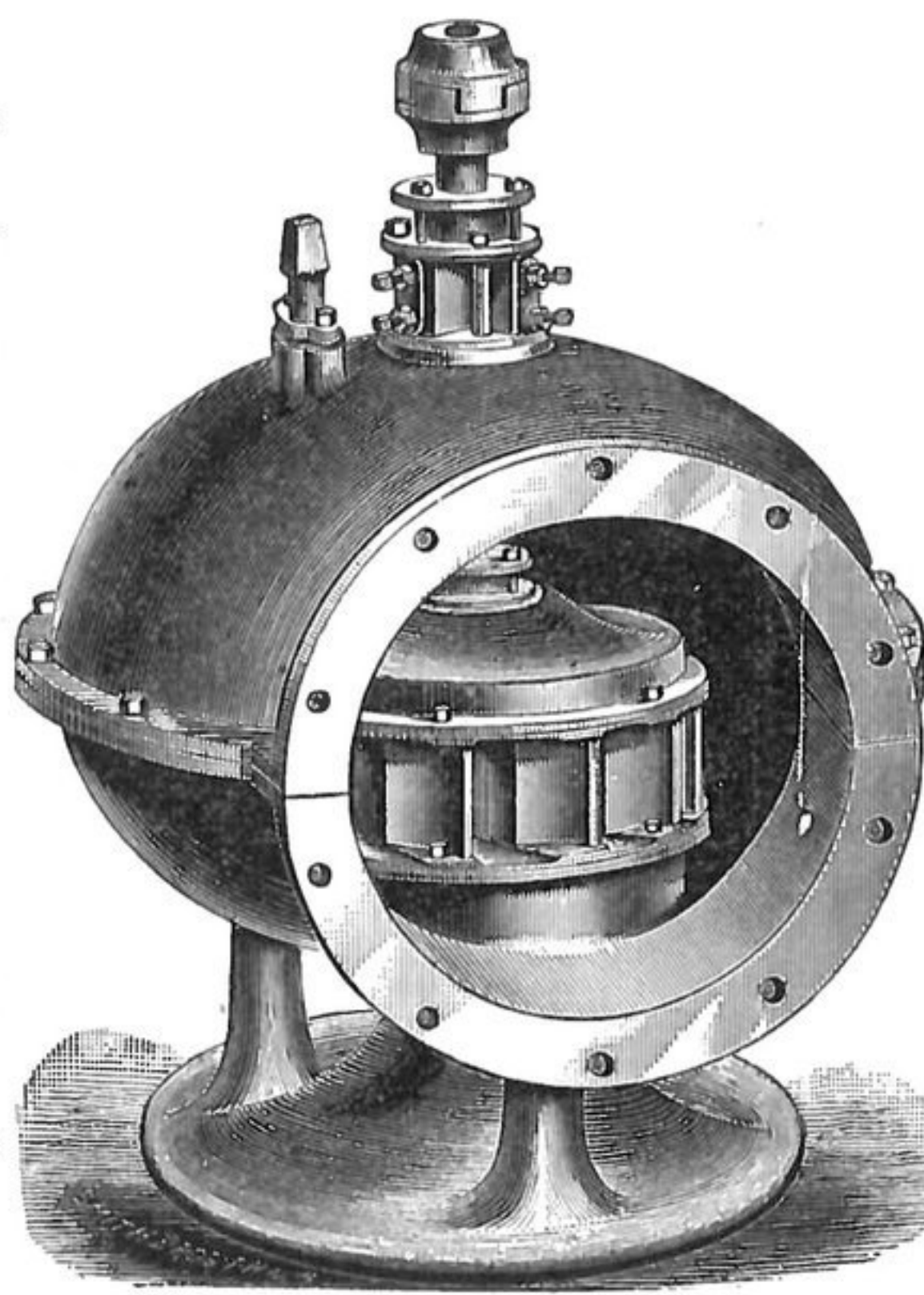
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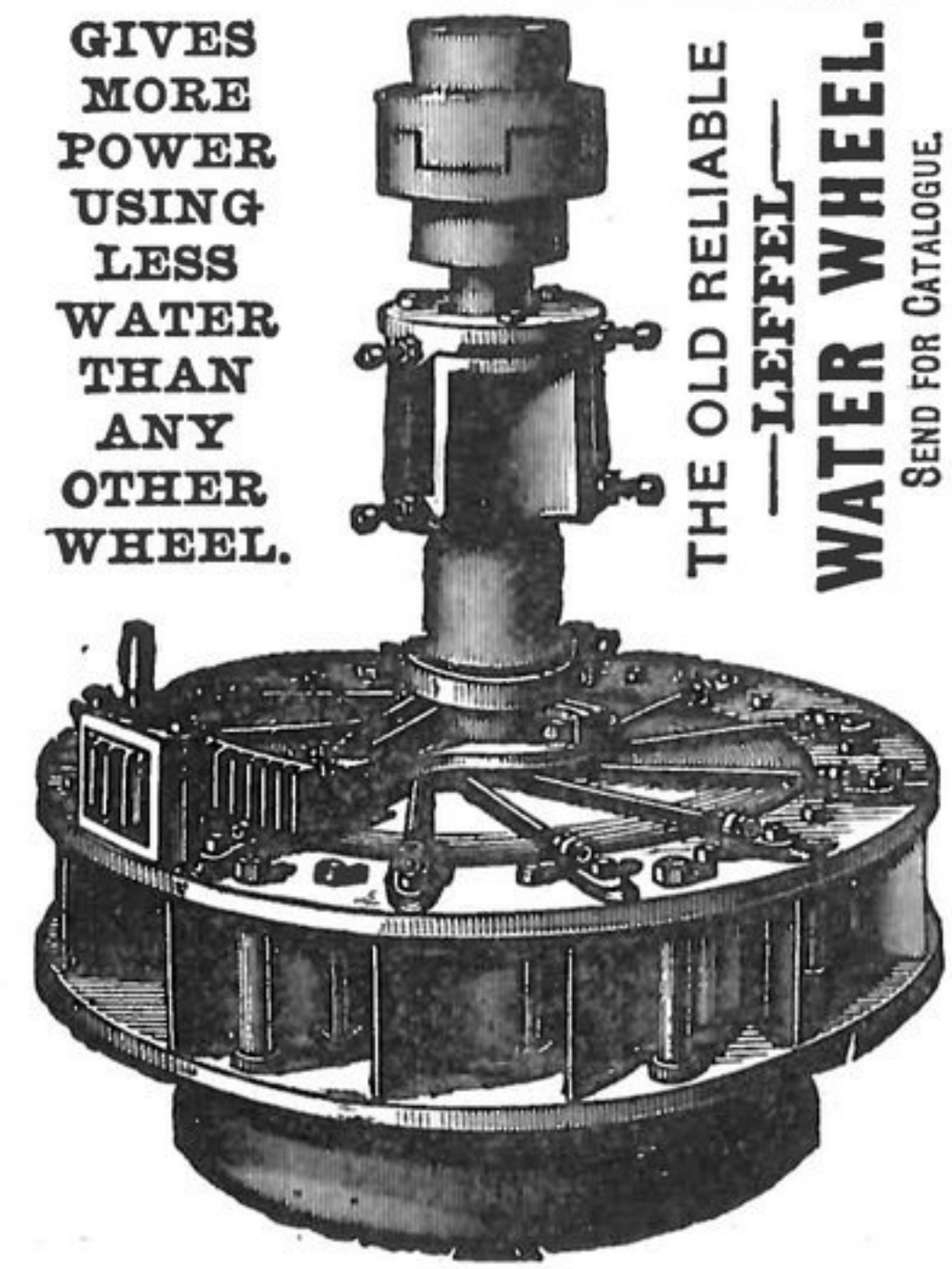


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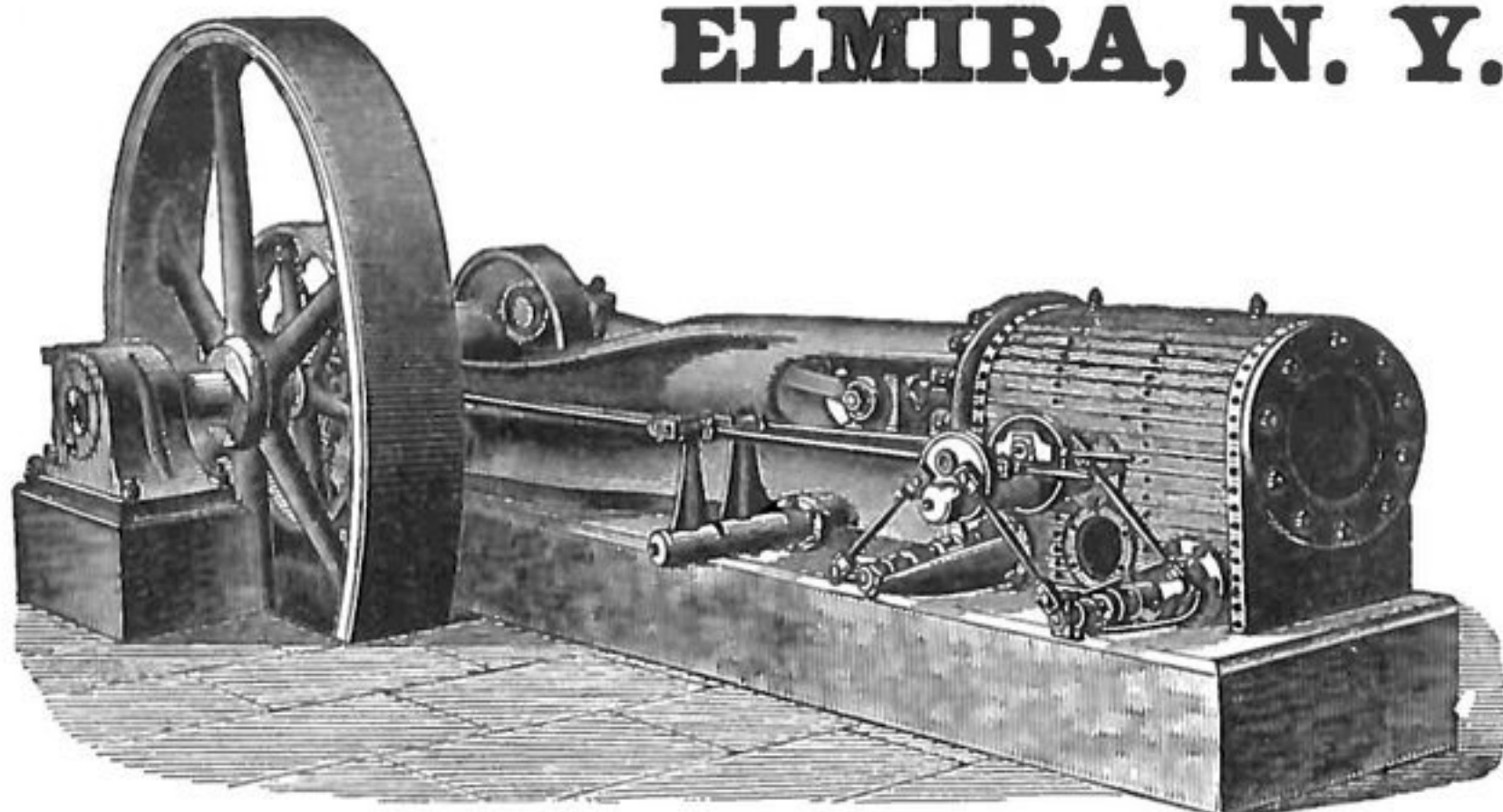
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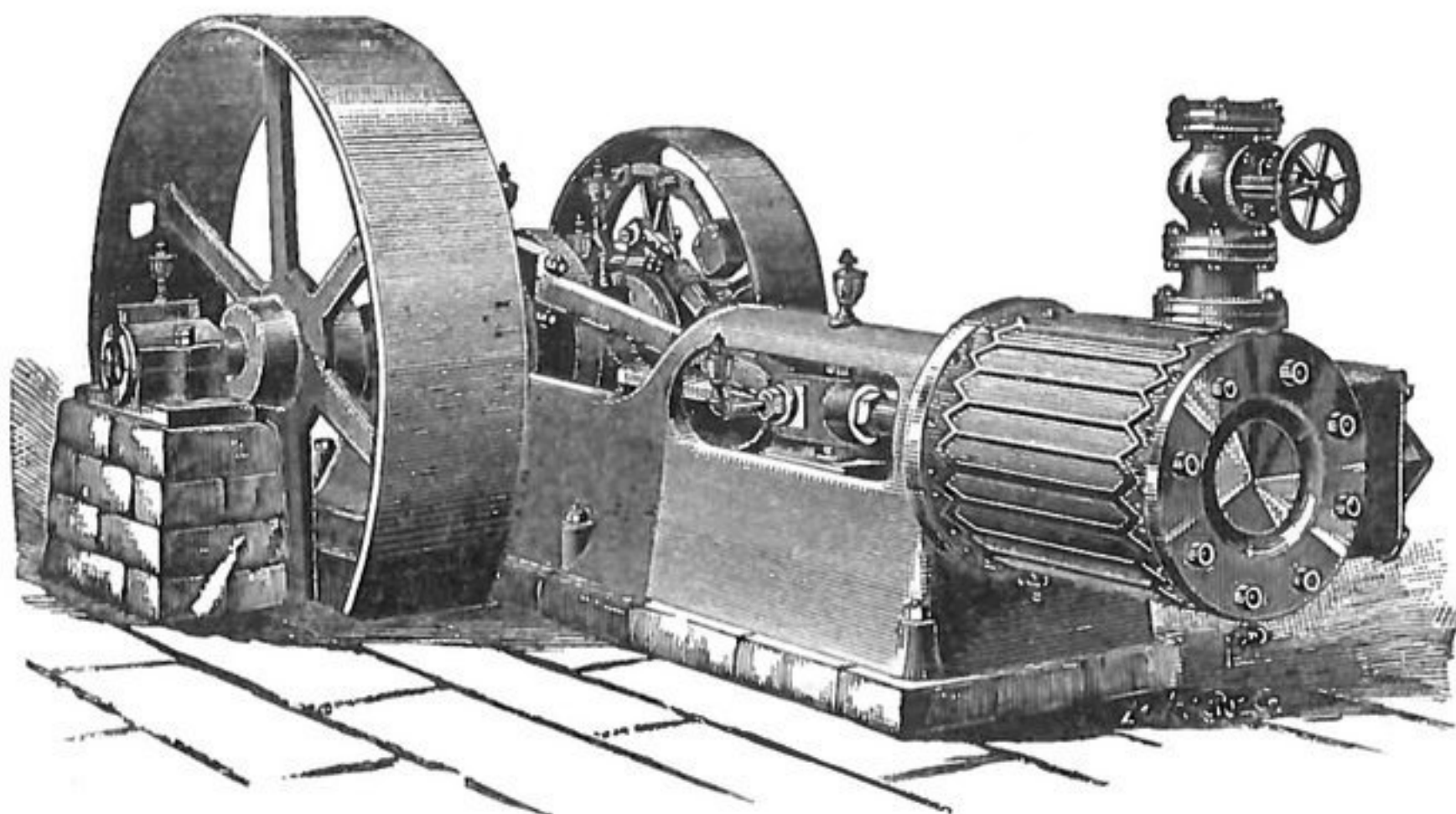
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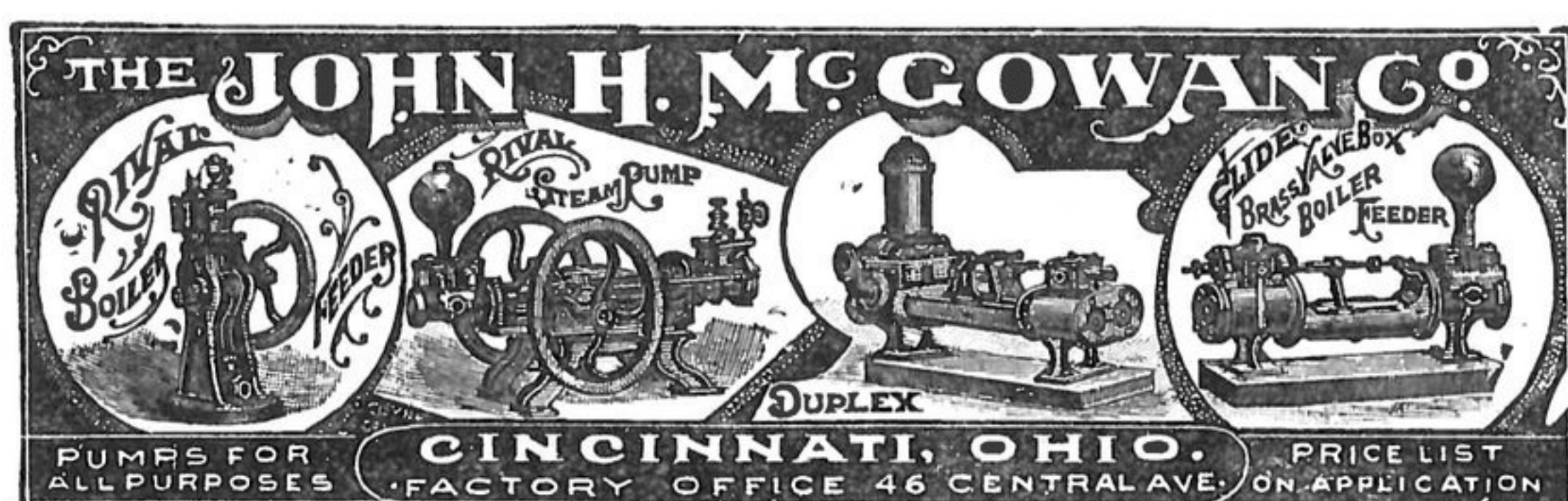
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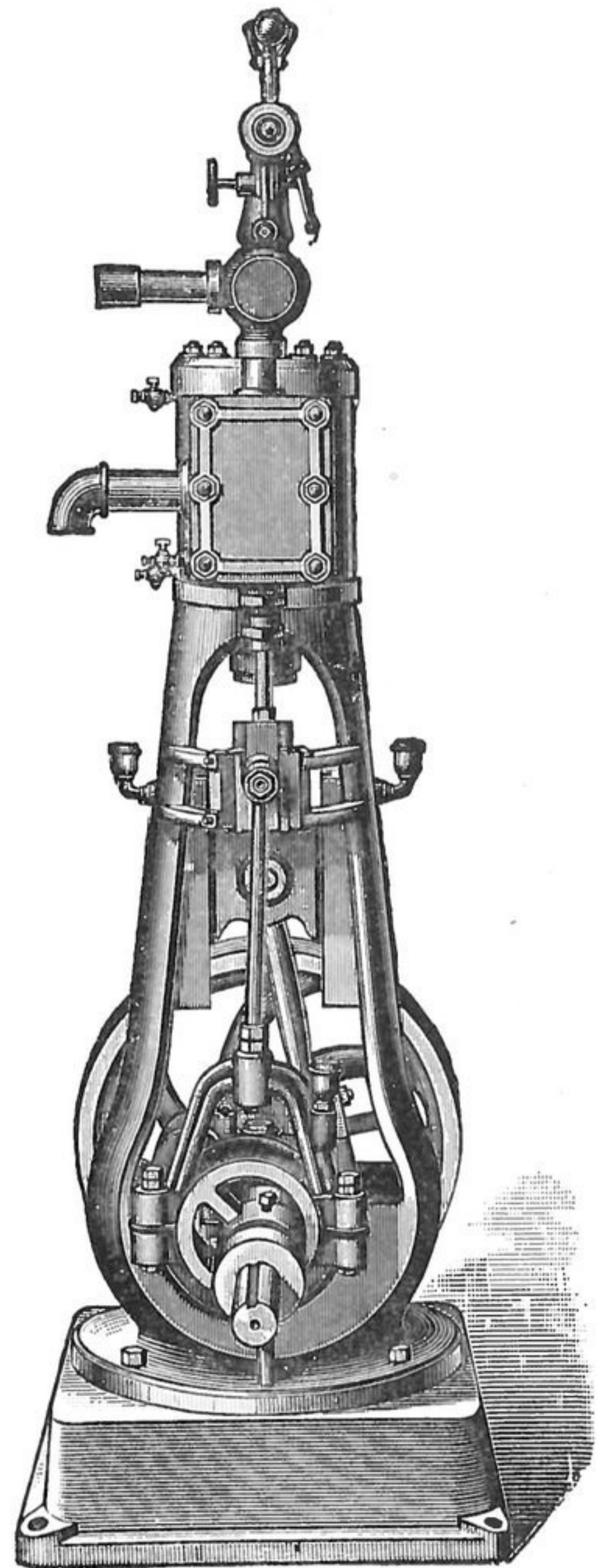
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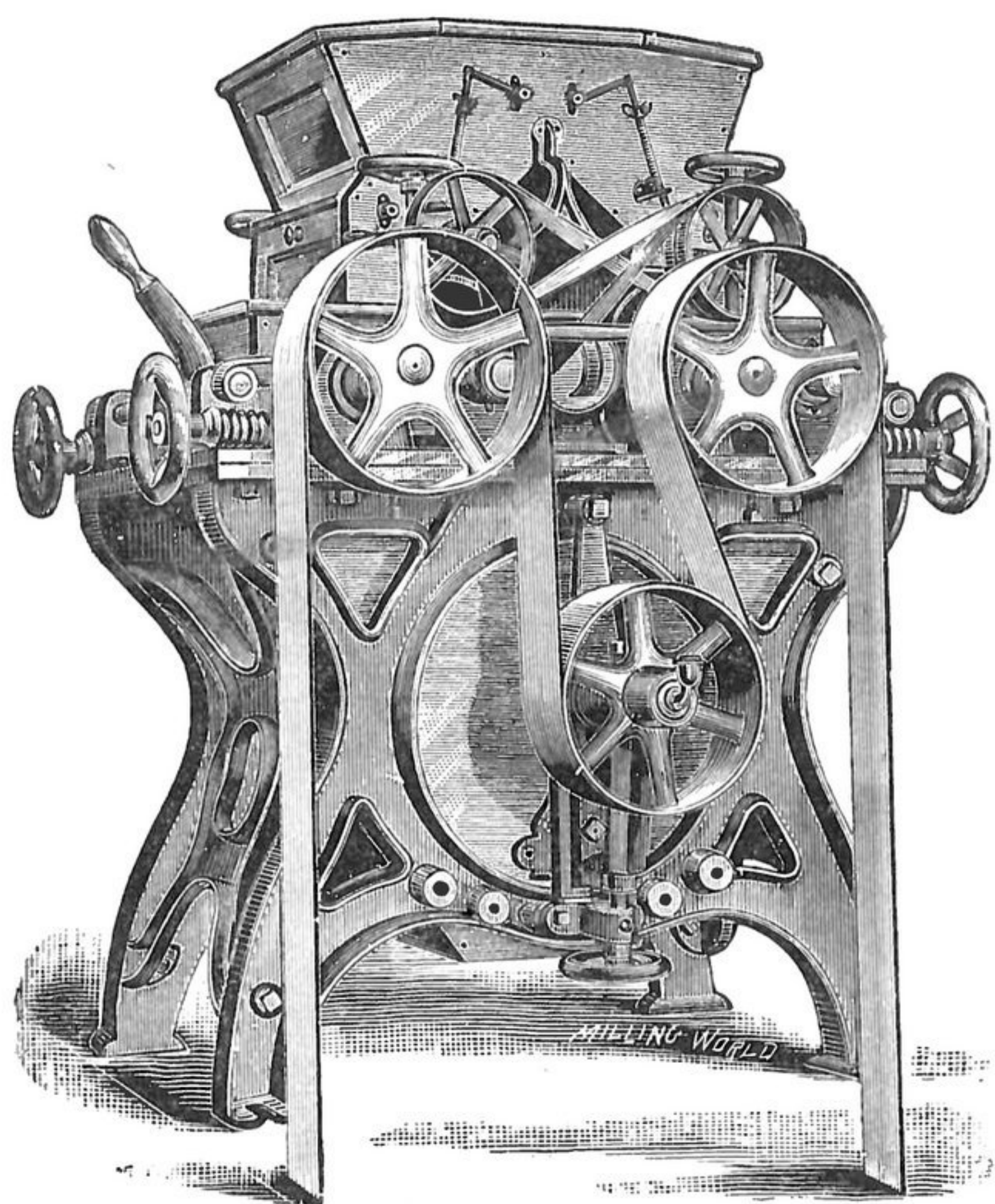


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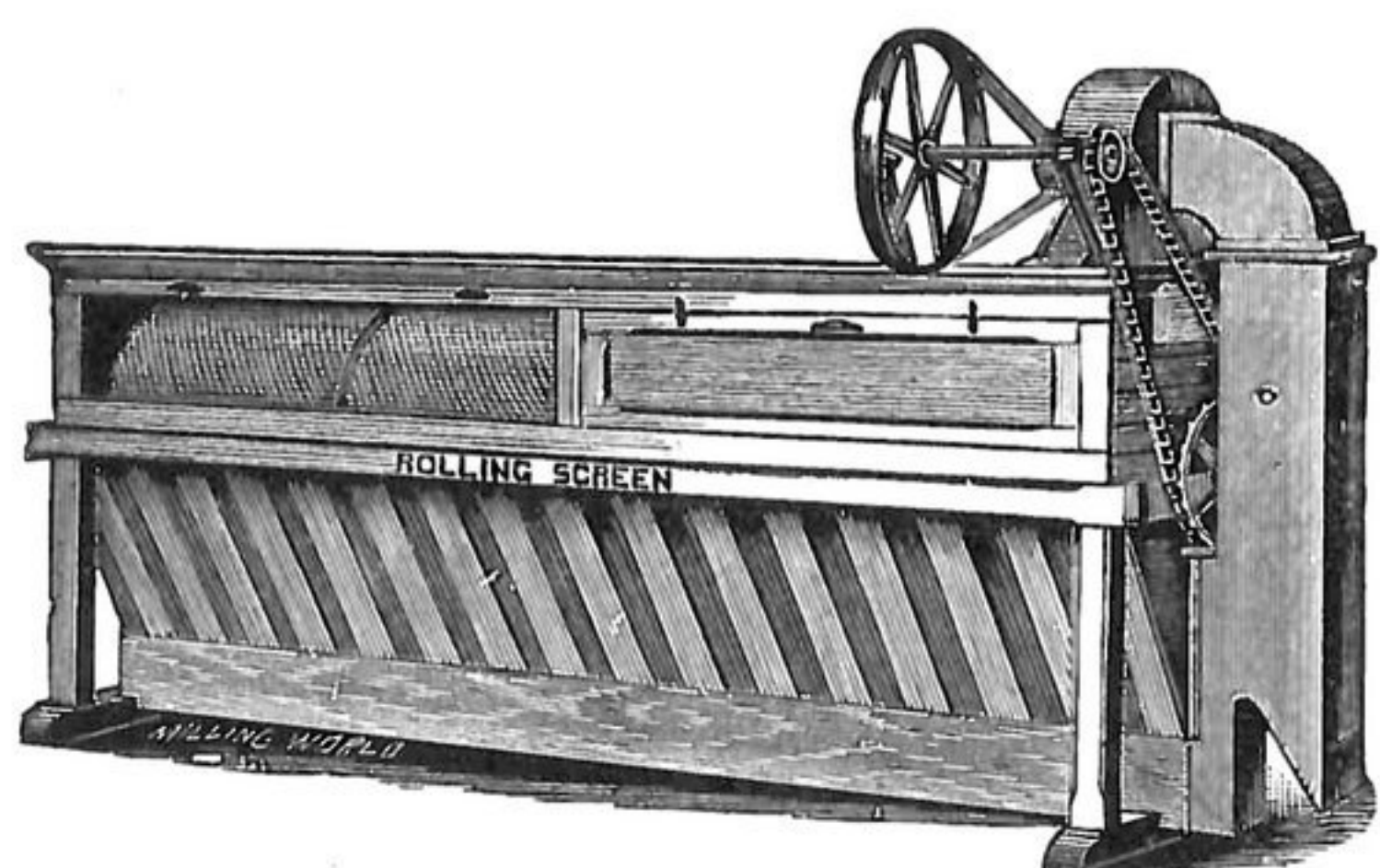
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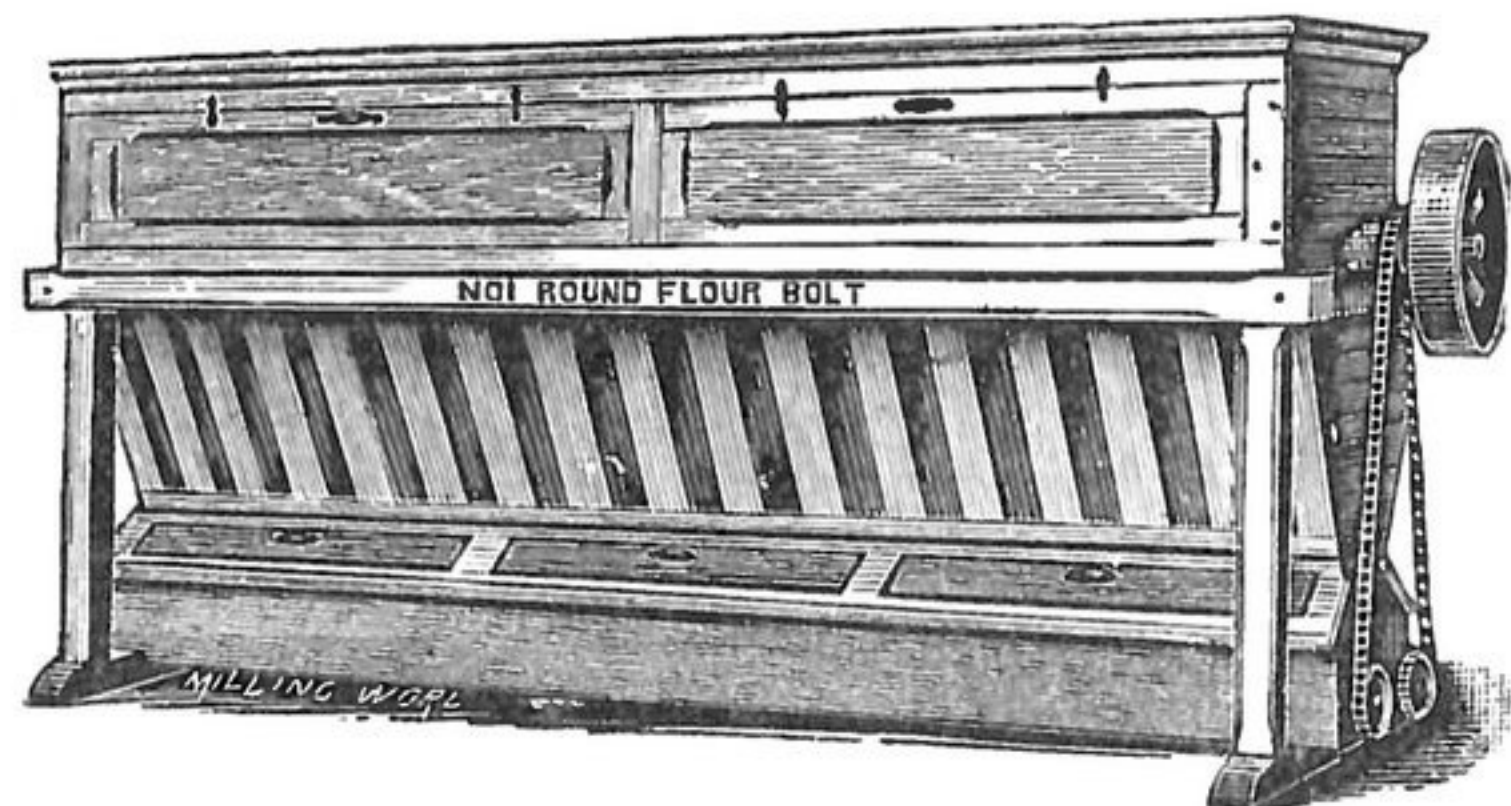
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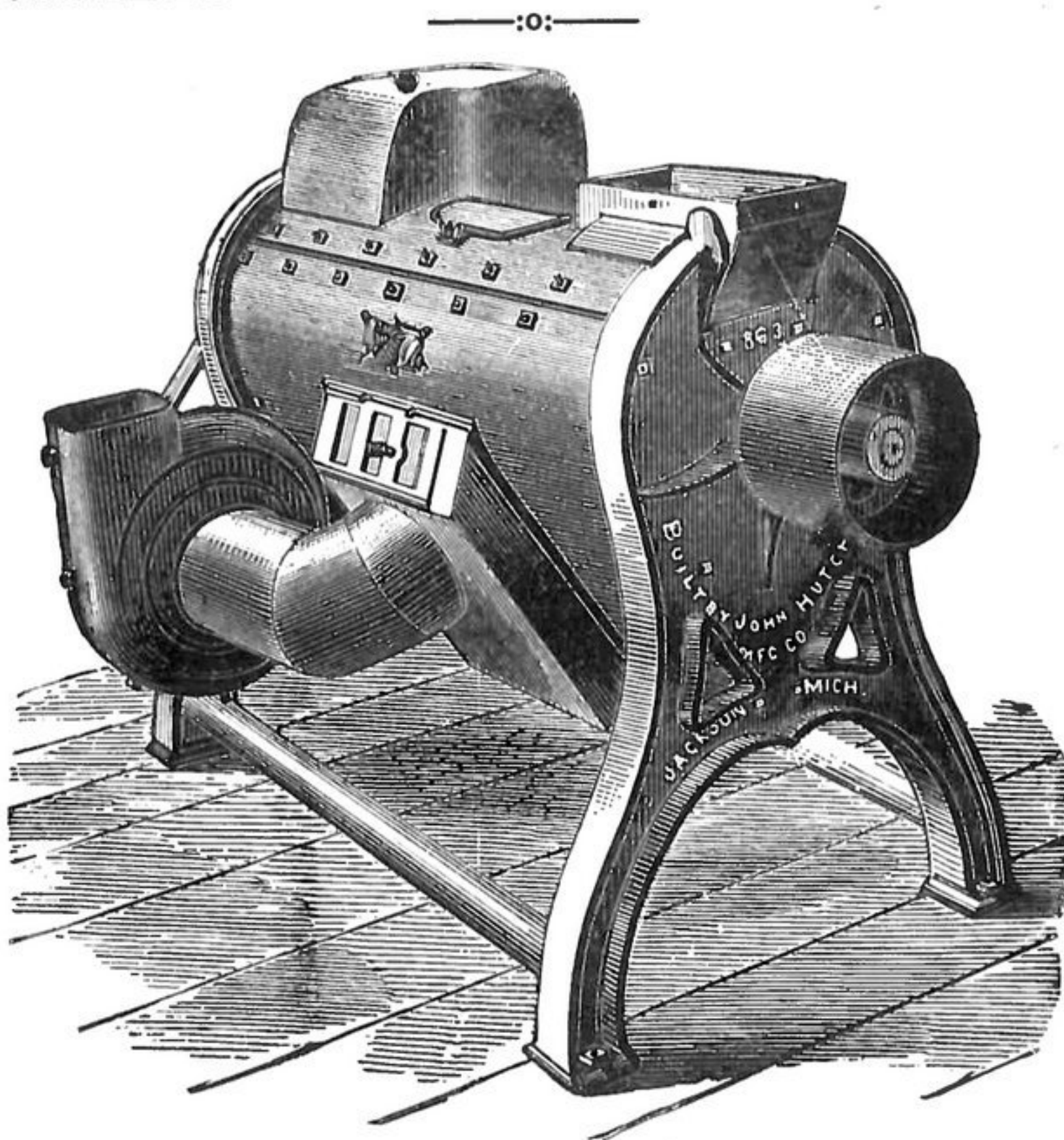


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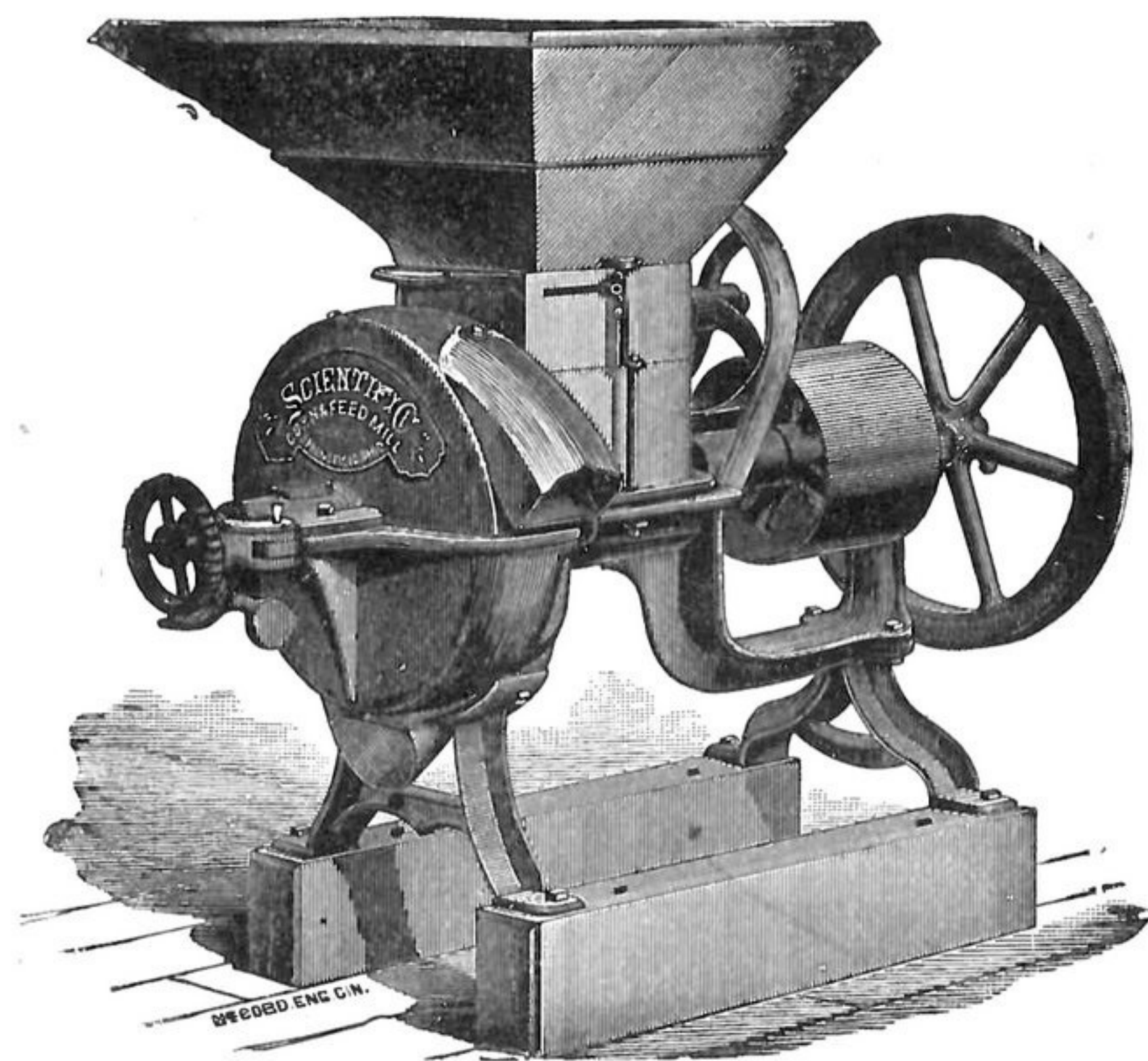
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